

BASIC PRINCIPLES OF DRAWING

Art X 5 A, B

BY
GLENN A. WESSELS

PART II

UNIVERSITY OF CALIFORNIA·UNIVERSITY EXTENSION
Department of Correspondence Instruction
BERKELEY, CALIFORNIA

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BASIC PRINCIPLES OF DRAWING

Part II · Assignment 1

v.2

Introduction

~~Art 116~~

In Part I of this course you were introduced to those graphic elements, the symbols for space and volume, by means of which any three-dimensional form may be represented on a two-dimensional surface. It was shown that these elements may be combined in various ways for various purposes, and that drawings made to fulfill a specific function differ from others mainly in the emphasis placed upon one or another of the basic principles of graphic art.

In Part II we shall deal with a representative selection of specific problems involving special uses of the technics of drawing and painting. Some will demand painstaking mechanical accuracy; others will be quite free from such restraints, but will call for an equal concentration of the faculties and an equal precision of expression of another kind. What you like best and do best will be largely a matter of your individual habits of mind, but you are advised to be persistent in the effort to understand and execute each assignment properly. Only in this way can you discover where your real abilities lie. Look over the field before you specialize.

For the student who undertakes drawing for the purpose of making working drawings or plans, for architectural rendering, interior decoration, stage design or window display work, extra assignments 1P to 4P are recommended. They deal with the simpler conventions of diagrammatic mechanical drawing, the making of plans and elevations, projection and perspective architectural rendering.

We must keep in mind this fundamental consideration: the psychological factors which affect the entire process of rhythmic space drawing are ignored or simplified in such work for the sake of convenience. One proceeds according to geometrical formulae, the conventions of which have been accepted by workers in the professions making use of this kind of drawing. Such work does not pretend to achieve the rhythmic balance of properly composed drawings and paintings. Its drawings are not creative works of art, but steps in the development of architectural or other projects.

For the student who does not wish to enter this special field, it is sufficient to understand how its working principles fit into the entire scheme of the practice of drawing.

The Process of Projection

To project is "to throw forward, as an image, shadow, etc., in drawing or mathematics" (Standard Dictionary). The essential purpose of projection is the transference of an image from one plane to another: from the plane or planes on which the subject lies to the picture plane.

Although most kinds of drawing employ some form of projection more or less freely, in mechanical drawing the projection process has been reduced to a mathematical formula. This process may be illustrated in simple form by projection of a shadow image upon a wall.



Shadow Projection; Cast Shadows

When an object is interposed between a light source and a wall, the object blocks out a certain area of the light upon the wall; it casts a shadow. The edge of this shadow will be sharp or not sharp (that is, diffused); depending upon the nature of the light: its size, or reflecting area; and the parallelism or divergence of its rays.

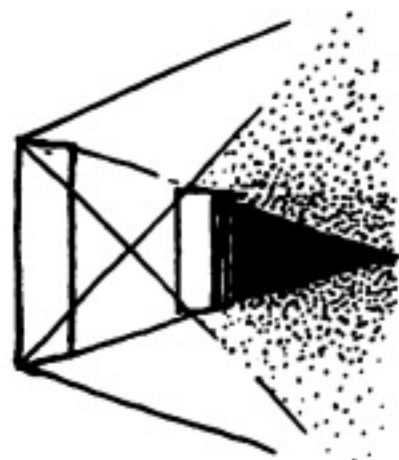


A theoretical point source of light would produce a sharp shadow larger than the object casting the shadow, since light rays from a point would diverge in all directions equally. Practically speaking, since there exists no source of light infinitesimally small in area, a certain amount of diffusion always exists at the edge of a shadow. The light rays which pass the edge of an object come actually from many points, and some cut farther around it than others. As a light source increases in area in proportion to the size of the object, this diffusion

becomes greater and greater, since more and more light rays from the edges of the light source get around the object and into the shadow.



A sharp shadow is also produced by rays of light which are parallel as they strike an object. Spotlights and projectors, when in proper focus, emit this kind of light. There is likewise comparatively little diffusion at the edge of a shadow cast from the sun, for its rays, practically speaking, are parallel.



On the other hand, the large expanse of reflecting area of the sky causes great diffusion at the edges of shadows cast from it. In fact, when the sky is unobscured and light comes from every side, no visible shadow is produced at all. The shadow cast by that part of the light from the sky which is obscured by the object is again illuminated by light from all other parts of the sky.

We borrow from astronomers the terms umbra, for the part of a shadow which is completely dark, and penumbra, for the part of a shadow edge which is diffused, in which the rays from the edges of the light source are not completely cut off.

Drawings of shadow projections are useful to architects, interpreters of aerial photographs, and interior decorators and stage designers who wish to know in advance the shadow effects of certain arrangements of illumination.



Fig 1

Figure 1 represents a room artificially lighted from a single point. Since the source of light is concentrated, there is relatively little diffusion; the penumbra of the shadow is ignored in this diagram.

To find the shadow of the table on the floor, it is necessary only to construct straight lines from the light source through the corners of the table to the floor. Notice that this produces an irregular four-sided pyramid. The part of the pyramid above the table top is of course invisible, but the part below is seen as a truncated pyramid of shadow. Of course this truncated pyramid is transparent, but its limits may be found by interposing another object to receive the shadow, between the edge of the table and the floor.

Perspective projection

Let us now interpret this simple diagram of a cast shadow in terms of linear perspective, or perspective projection, which is the system of geometric formulae adopted by architects for renderings in linear perspective. These drawings are intended to represent the optical appearances of objects in space, as they might appear to one eye operating without a brain.

Let us place this one eye in our diagram in the position of the point source of light, and call it the station point.

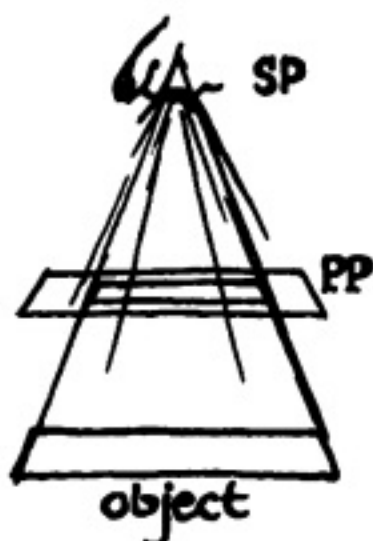


Fig 2

We now lay an imaginary pane of glass over the table top. This we call the picture plane, and on it we trace the shape of the table top. On this plane we also draw a line around the shadow which the table casts upon the floor.

Table and shadow are now whisked away and forgotten, leaving the pane of glass suspended in air. We have left an imaginary three-dimensional demonstration of the relation between the eye, or station point, the cone of vision, the picture plane, and the object. (Figure 2.)

If a transparent plane is interposed between an object and the eye of the observer, the lines of projection will intersect this plane and trace upon it the outlines of the object.

If the picture plane were moved farther from the eye or station point and closer to the object, the trace of the object upon it would

of course be larger: the transparent plane would truncate the cone of vision at a point where its diameter is greater.

Consider the picture plane as corresponding with the surface of the paper upon which your drawing is to appear.

The above terms are commonly used in applications of the method of linear perspective, and may be found discussed in greater detail in texts on the subject. A description is also included in the Encyclopedia Britannica.

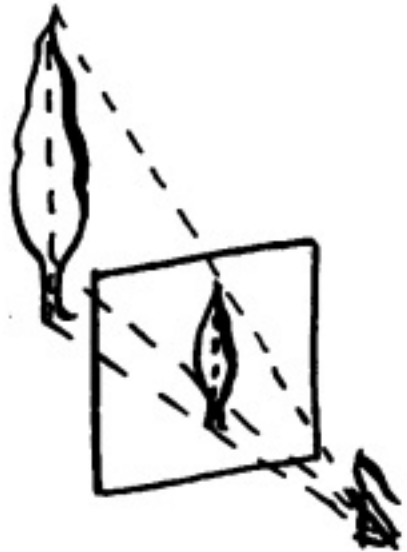


Fig 3

Perspective and the Seeing Process

When a student begins to study drawing, one of the first words thrust upon him will be "perspective." In its original sense the word had a broad meaning: per, through, and specere, to see; hence, "to see through." Latterly, however, its use has been generally limited to denotation of the geometric formulae of projection. In this sense, perspective projection, or linear perspective, is only one of a number of symbolic methods for representing space, and is of no greater importance than any of the others.

Foreshortening is another term which has long been used to sum up the business of drawing objects as they appear to recede into or press forward from deep space. The meaning of the word is demonstrated in the accompanying diagram (Figure 4). A line seen parallel with the face of the observer is not foreshortened, but if the same line be rotated away from the picture plane so that one end is nearer to the observer than the other, the apparent dimension of the line will be shortened although its actual length in space remains the same.



Fig 4



If we turn the line into a plane and rotate the plane, the same thing takes place, but we notice that the vertical dimension of the plane also seems less in the distance than near at hand. This appearance of losing size with greater distance from the observer is, of course, due to the physical functioning of the human eye. It is only an appearance, and in the completed seeing process other faculties of the mind usually correct any illusion which may result. Thus it is neither a physical nor a psychological reality.

The reduction of this appearance of size diminution to a geometric formula, and application of this formula to the determination of relative sizes of objects in space in a drawing is the method known as linear perspective.

Atmospheric Perspective

The word linear is used to distinguish the application of the perspective idea of diminution to lines and the shapes which they surround.

A similar formula, based upon appearances of the colors of seen shapes, is called atmospheric perspective. It is derived from the notion that distant forms usually appear less contrasted, less intense in color, less black or white, than forms nearby; that instead they seem more nearly cool, neutral bluish gray as they approach the horizon. This is attributed to the fact that more and more atmosphere, containing haze which reflects the color of the sky, is interposing itself between observer and objects as they recede into space.

The formula of atmospheric perspective dictates the degree of purity or neutrality of color possible to a form at a given position in space.

Far Distance

Middle

Foreground

Fig 5

In practice this kind of perspective is less often applied strictly, perhaps because this form of appearance varies more than the other. Consider, for example, such an exception as the coloring of a brilliant sunset, where the greatest intensity of color is seen farthest away.

Subordinate Place of Perspective in the Seeing Process

There are good reasons for varying from these formulae or abandoning them entirely in the creation of a complete composition. Two obvious reasons are these: First, in any good composition the power and efficiency of expression depend to a great degree upon rhythmic structure. Final effect depends in part upon rhythmic relations of shapes in the picture, and the size relations of these shapes contribute to their rhythmic relations. The application of perspective formulae for size diminution in space often destroys such relations.

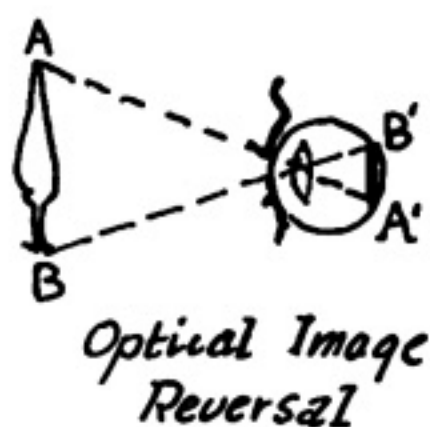
Secondly, the very meaning of a picture may be adversely affected by the application of a perspective rule for size relations. For example, important figures or objects in many famous works have been drawn larger than perspective formulae would allow, in order to emphasize their prominence. Size itself is thus used as a symbol for importance, and expressiveness would be lost by subjecting it to a mechanical rule.

The study of the mechanical and formulistic aspects of perspective has in many schools been substituted for the entire subject of space drawing. The importance of perspective formulae has often been exaggerated to a point where all other considerations which affect the process of drawing forms in space have been subordinated, overlooked or forgotten. Perhaps this has happened because it is easier to memorize a formula than to think out each new space problem as it arises, and to decide upon the combination of lines and spaces by which it may best be solved.

It is true that our habits of space-seeing take into account the visual appearance of size diminution as an object moves away from us into space, and to interpret this appearance correctly when we are provided, in the picture or in the scene before us, with the necessary sensory information. The mind automatically compensates for a limited amount of such size diminution. Indeed, if a drawing fails to take into account this mental habit, it may exhibit false size effects as deceiving and distorted as those resulting from the injudicious application of perspective formulae. The draftsman must work between the two extremes, guided in each case by a mental concept of the relative sizes in his subject.

The Seeing Process

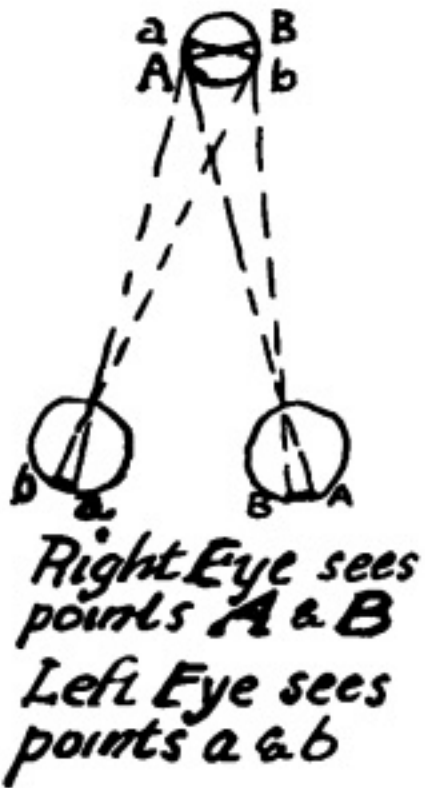
The main cause of confusion about the place of perspective in the body of knowledge concerning space drawing probably lies in a misunderstanding of the process of seeing.



We may think of a single human eye as a sort of camera, the retina at the back of the eye as the sensitive plate. We may diagram the projection of an image upon the retina and come out with a sort of perspective diagram. The thoughtful person may observe that the image on the retina will inevitably be upside down, although our minds conceive it as right side up. However, if that were all there is to seeing, it would be easy, with a little specious reasoning, to insist that all the rules which may be derived from this optical diagram should be applied to the process of making a picture.

But that is not all there is to the seeing process. To draw on paper a trace or copy of the optical image as projected on the retina is possible, but the drawing will not correspond to the artist's mental conception of the reality.

What must be considered in the formation of a mental concept of reality besides this upside down, one-eyed view of things?



First, the mind receives more or less simultaneous images from two eyes, in normal vision. These images are projected from slightly different angles, and contribute to the mental concept more information about the roundness or third-dimensional aspect of a form than does a single image from a single point in space. This binocular vision is most noticeably operative upon objects comparatively close at hand, hardly operative at all upon objects far away. The two-sided view tends to merge more and more into a single view as the angle of vision between the two sides diminishes in proportion to the distance of the object from the eye. Forms seen further away tend to look flatter, forms nearer at hand more rounded.

Binocular vision gives us, as it were, a visual grasp of the object. We feel its three-dimensionality with our eyes very much as we feel the solidity of an object between our hands.

A strict application of the principles of linear perspective assumes that the eye of the observer is single. It ignores the effects of bifocal vision. In addition, it assumes that the observer will remain at a fixed point in space in gaining his information about what he is seeing. Neither assumption is true, and we find that successful compositions depart quite freely from the single-eye view of the world, as well as from the fixed-point view of the world. Even in those pictures which observe the diminution of sizes as objects recede into deep space, we often find objects or parts of objects which are tipped or turned to show their more significant contours.

Significant Contour (cf. Part I, Assignment 10)

The prehistoric cave-man and the early Egyptian drew in terms of the outlines of objects, as do modern children and untutored draftsmen in general. In successful drawings, outlines are not copies of the accidental, projected-shadow sorts of shapes. Most often the contour of an object, or part of an object, is chosen which expresses the important characteristics of the form. Such drawing is an interpretation of form in terms of outline, constructed so as to suggest the inner characteristics of the object so described.

The word describe, in the original sense, means "to write fully." An outline which describes a form should convey as much information as possible. Thus the Egyptian, in drawing a single figure, turned the head to side view but the shoulders to face view in order to describe them better in outline, in order to bring out with this line what he thought were the most meaningful and important contours (the significant contours) of these parts of the form.

A contemporary artist often shifts the parts of a single object, or shifts objects in their relation to each other in a group, or changes the position of their shadows or reflections, in the interests of volume and space expression and in the interest of rhythm in pattern and in space. If he wants to show a little more of the top of a teacup in order to indicate that it is round, he draws the top turned upward far enough to express roundness. He shifts his viewpoint temporarily to draw this part of the form. Similarly, if he needs to show the side of an object, he draws its side even when he cannot actually see it.

This freedom from the iron rule of academic mechanical perspective is found in the works of all painter-composers. The principle is well demonstrated by Loran in his study of the work of the artist Cezanne. (See Erle Loran: Cezanne's Composition. Univ. of Calif. Press, 1943.) The examples used are particularly illuminating because they include photographs of the scenes painted by Cezanne, taken from the identical spots where the painter worked. Thus it is easy to note the changes which this great master of composition found necessary, in the pattern presented to the eye at a given point in space.

The same freedoms from strict linear perspective occur in most of the works of master painters; but it is not often that we are able to locate their original subjects, in order to photograph them for comparison with the paintings. Changes often seem so right and real that they pass unnoticed, and the observer may be deceived into thinking that the master has achieved his effects of truth to nature through mere perspective copying.

There is a mistaken tendency on the part of many draftsmen to assume that an image, as it appears on the back of the eye (the retina), is transferred as a coherent whole to the brain.

Nothing is further from the truth. The two separate and upside down images from the eyes are broken down into impulses which pass along the optic nerves. The crossing of the optic nerves brings the left image to the right side of the brain, and the right image to the left side. In the process of merging these two "scrambled" images into an idea or mental concept, the information stored in the memory as a result of previous experiences is brought to bear, and exerts a large influence upon the formation of the mental image. The final product is a combination of present visual sensation with all previous feelings and images which have a bearing upon the experience. We are seeing, as it were, through the spectacles of the past, which may include a variety of views of our subject.

Some of the less understood drawings and paintings done by contemporary artists represent the attempt to set down in one picture all the forms resulting from the mental synthesis of such all-around seeing.

When we consider the matter in this way, it is evident that any simple geometrical formula for establishing on paper the measurements of objects before us as they appear upon the retina will be inadequate as a ruling principle in space drawing. It simply does not take into account all the important facts of vision.

Exercise (a)

(1) Draw several objects, such as dishes, a pipe, books, or furniture. First draw the accidental shadow contour. Then turn and tip the object until you find the shadow contour which seems to express the most about the entire form. Then turn your back on the object and try to draw it according to your mental concept of it.

(2) Ask a friend to pose for you in a standing position. Draw him from one point in space, adhering as closely as possible to the visual pattern as it appears from that point in space.

Make another outline drawing of the same pose, but this time be prepared to move as you draw. Draw the head from a point in space level with the head, and slowly change your position downward as you draw the lower parts of the figure, always keeping your eyes level with the part you are drawing.

Compare the two drawings, noting differences.

(3) In a third drawing of the same pose, try moving yourself not only up and down but somewhat from side to side as you draw, choosing what seem to you the significant contours and combining them into a coherent whole.

(4) Now walk completely around the figure, and try to combine the several most significant views of it into one. Try to make them work together to make a coherent whole.

This drawing may seem so unlike any you have seen that you will be unduly critical of it. But make the attempt anyhow, not because you expect to do such a complex drawing well, but because the experience will be good for you, and will enable you to understand better the difficult many-viewpoint kind of drawing which some contemporary painters use in their work. Your purposes in drawing may or may not demand a mastery of this kind of drawing, but any draftsman will be better off for practice in it.

These are not easy exercises, and your last efforts will be better than your first. Work at them as long as you are able to retain interest, and turn in the drawings which in your opinion best exemplify the qualities above described.

Part II · Assignment 2

Perspective and the Seeing Process (cont.)

A study of certain early works of art and of the drawings of some children and untutored persons of today will show that their makers either were not conscious of the appearance of size diminution, or that they discarded it entirely as a method of space building. For instance, some works present figures of men in a distant background, which may measure as high as figures in the foreground.

Similar examples of the ignoring of perspective effects are found, moreover, in the works of highly trained persons who are fully able to comprehend the intricacies of perspective formulae.

To the observer these background figures sometimes appear oversized. Nevertheless, such drawings and paintings often exhibit a greater degree of psychological truth, or truth to mental conception, than do those done according to a perspective formula, and mentally and emotionally may be much more significant than the average photograph with its optically perfect perspective.

For this reason many modern artists and teachers have abolished the use and study of perspective as such. Indeed, it is often found that the drawing of children and untutored persons in general is more expressive than that of persons highly trained in a formulistic manner of drawing. It is certain that the application of any mechanical rule for the diminution of sizes of forms as they recede into space will much diminish the expressiveness of the draftsman's medium.

Do not allow yourself to arrive at the notion that naive thinking and lack of training in art are in themselves productive of high expressiveness. It is true that the drawing of simple and untrained persons is often more expressive and effective than that of persons wrongly trained, but such drawing seldom if ever approaches the excellence of the work of a properly trained, mature individual who has retained the ability to comprehend freshly the ever varying relationships of familiar forms. For such a one, the slightest change in space or color relations produces a new compositional problem. When this kind of nascent vision is achieved, and the mind of the artist is free of visual cliches and trite formulae, he need no longer be forever on the hunt for new subject matter. He will find new stimuli to original work in the accidental relations of the most commonplace objects. Rembrandt, Chardin, Cezanne, Matisse, and Picasso all have set the example for this kind of work.

Conceptual Drawing

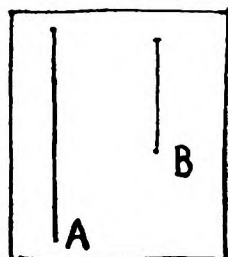
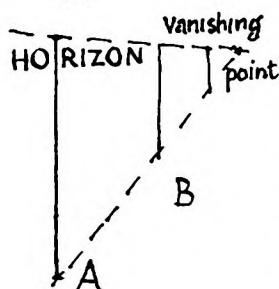
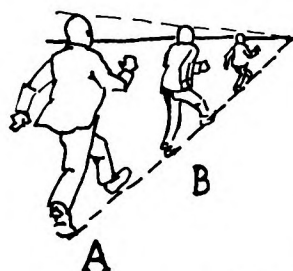
If one cannot learn the richest expression by learning formulae, and if total innocence of formulae will not produce the desired results either, how may one discover the necessary compensations which will correct perspective illusions and deceptive appearances?

Let us first accept the basic idea that a form must give the denotation of its true size wherever it appears in a picture. When size relations are an important part of what is being expressed, and they usually are, it must be the satisfactory size effect of the form in the picture for which the artist strives, and not an optical copy. The form should be drawn large enough or small enough to convey the idea of size which the artist intends. Size relations in the picture should feel right, look right, not measure right. They cannot be determined exactly for different works with different relations of inner elements by any general measure or rule.

We have granted that it is a part of our habit of space-seeing to take into account the visual appearance of size diminution, and to correct for it when we are provided with adequate other sensory or remembered data for such correction. If, therefore, we choose to begin with the idea of a loosely applied perspective formula from which we expect to vary, we arrive at a method which has been called compensated or corrected perspective.

The term "freehand perspective" is to be avoided in this connection because, although it refers to a perspective drawing made without mechanical aids, too often it merely attempts to reproduce without instruments the unfeeling mechanical distortions of instrument drawing.

"Freehand" drawings are often free only in name, and do not always avoid the destructive effects of optical drawing. Truth to the concept in drawing requires the laying aside of formulae as soon as they dull or obscure the realization. They can guide the artist only part of the way, if at all, towards the necessary fresh comprehension of the quantities and qualities of objects and the relations between them--a realization which must be new every time they are drawn.



Let us here consider some of the major adjustments which must be made in the interest of true expression even while we adhere fairly closely to the idea of observing the subject matter from a fixed position. We may use as our example a human figure of known height, walking away from an observer.

As the figure recedes into space, he apparently (not actually) becomes smaller in every dimension. When he is far away we do not think of him as a smaller man, but as a man who merely appears smaller. A perspective formula would determine his size in the picture at various depths, as shown in the diagram.

Now consider some of the other factors which are active in determining the rightness or wrongness of the size effect of the figure in the complex of shapes which is a picture. If we take away the diagrammatic scaffolding which has assisted us in constructing the figure at different depths in space, the lines of this perspective diagram are now operative only as subjective lines. Their control of the size effect of the figures within our format diminishes or disappears, and other factors in size effect become relatively more important.

When the figure is close framed (cf. Part I, Assignment 3, on Measure, Scale, Proportion), we seem to have a large man, as on the left, but a small man compared to the long frame line on the right. Man A now appears actually larger than B, even when we think of B as being somewhat back in space. We shall have to draw B in this case a little larger than linear perspective would allow if we wish the drawing to convey the meaning that A and B represent men of the same size.

Again, supposing we surround A with a small dark area, and let B be seen dark against the remaining large light area. Since black is absence of light, the white paper appears to expand into the black areas. This again makes A apparently larger than B. The brighter the light reflected from the white, the more pronounced will be this expanding effect of white (or of any bright, intense color) in contrast to more passive areas.

These examples illustrate the complexity of the problem of proportion when it is approached in this way.

Two exercises will serve to bring out the difference between drawing from the standpoint of formulistic "freehand" perspective, and the more positive method of drawing which we call conceptual.

So that the perspective method may not affect our conceptual drawing too much, let us execute the latter first.

Exercise (a)

Choose as subject a view seen through a window, in which there are near objects, middle-distant objects and far-distant objects.

Plan to make two drawings of this subject, each on a full size sheet of your manila pad.

(1) Looking at your subject through the window, decide how much of it you are able to see clearly at once, by the method described in Part I, Assignment 3, Measure, Scale, and Proportion. Choose a middle point about which you will compose your picture, and decide roughly which

forms and parts of forms will come near the borders of the paper. (Your middle point has been described as an imaginary point of balance between the most interesting forms in your selected view.)

In this case, before you start to draw, go for a walk into the space of your subject. Walk as near as you can to the middle point you have chosen, and look at the objects which will appear in the foreground. Compare their sizes with those of objects which will appear in the background.

"Size up" the various volumes, try to comprehend and memorize their real size relations. Is that bush which loomed so large in the foreground as you looked through the window really important after all? Compare it with some other form which is as far from the middle point on the other side.

After thus getting closer to the reality of your subject, go back to your place at the window. While your experience with the actual sizes is fresh in your mind, begin at once to draw the subject. Do not measure or use mechanical aids or perspective lines in any way. Feel free to show more or less of some of the forms than appears in your view from the window.

Think again and again of walking out into the landscape you are studying, of how big or how small the forms actually are. That near bush certainly is much smaller than the distant hill, and should be set down in your sketch to look that way in spite of its apparent size in the window view. You will not, of course, try to produce the hill and bush in true scale, as they would appear in an architect's plan. Although you may know that the hill is ten times as high as the bush, you will not put them down this way in your picture. Instead, you will attempt to draw these two shapes in such comparative sizes that a person looking at the drawing may know that the hill is approximately ten times as high as the bush.

Remember that, due to our habits of space seeing, we take into account a certain amount of size diminution. The hill may need to be drawn only a little larger than the bush in order to give the effect of its true size in the picture. (Probably it should not be drawn smaller than the bush. Some masters have even reversed the effects of perspective in order to avoid over-expansion of foreground objects.) Be sure you do not try to copy the actual optical pattern which hill and bush present to your eye as you look through the window. The effect of this sort of drawing will be tried in the next exercise, for purposes of comparison.

You may even wish to try turning your back on the window, at least in the beginning, in order to draw what is in your mind without being disturbed by the perspective distortions which appear in the window view.

The pattern of shapes which you put on your paper should not correspond point for point with the pattern of shapes on the window, but with your mental picture of the relative sizes of the forms. Let us say that when you look through the window, the top of the bush seems just to touch the line of the top of the hill. In your mental picture you know that the bush is really much lower than the hill, so you do not reproduce the appearance. You may, for instance, place the top of the bush much lower than the top of the hill in your drawing. In short, you are free to move around the parts of the pattern appearing on the window pane, and to change their sizes and relationships until they correspond to that mental image of the scene which you achieved by actually walking into it.

The execution of this drawing will demand a conscious effort of will, to avoid too much influence by the pattern as it appears on the window. You may find it necessary to redraw and correct a number of times, and you may have to take your walk all over again, to reinforce your comprehension of the real sizes of things. But if you have honestly tried to put down graphic symbols for mental images, your drawing will be adequate to illustrate the difference between conceptual drawing and optical copying, when the problem is one of deep space.

(2) In your second drawing, abandon the mental effort of the first. This one will be easy by comparison, for all you have to do is to trace on the window glass the pattern of the outlines of the various forms seen through the glass from one point in space. It will simplify matters to use one eye. Copy this pattern in suitably reduced scale upon the manila pad. The result will be a freehand perspective drawing.

Now that you have studied your subject carefully, you will find that this second drawing distorts true size effects considerably, and may exaggerate distance. Forms in the foreground will present an inflated, swollen appearance, and those in the distance will seem far away and too small. This will be all the more apparent if you have begun your drawing with the very near foreground. You will find exaggerated size diminution destroying the truer size effects

which are found in your first picture. You will probably also note that your first drawing is better in rhythmic design, and that it presents a more interesting variety of sizes and shapes, as well as being more unified, with its parts evidently relating across the middle point.

When you compare the two drawings you should find, especially in comparing very near with very far objects, that the first drawing corresponds much more closely with your mental comprehension of the objects and spaces involved. It should tell more about what is really going on out there in that section of space which you have chosen to depict. Distortions due to eye limitations should have been somewhat corrected and compensated for by the modifying effect of your mental concept.

Your first drawing should have more in it, more "content." It should express more because it is the product of your mind and of your feelings about things, not merely a formulaistic copy of optical appearance. It is the result of contemplated experience, and in that sense it symbolizes more of reality.

You should be able to see easily that your first drawing is better in these respects, even though it may be far from perfect and marred by correction and uncertainty. Your second drawing may have been more easily and skillfully done, since the effort required to copy is not nearly so great as that required to build up a three-dimensional mental picture, and to symbolize and express this picture in terms of lines and spots on a flat piece of paper. Do not be deceived by the superficial ease of execution of your second drawing, and do not mistake smartness and sureness of technical treatment for intrinsic worth. In time, when you are more sure of your mental pictures of things, you will set them down with more convincing effect, with the spontaneity and technical dexterity which comes with mastery of your medium. In art as in other activities, it is easier to be smart and sure in dealing with simple, unimportant ideas than with complex and important ones.

In your first efforts at concept drawing you will sometimes undercorrect and sometimes overcorrect the distortions of perspective. It is a good idea to redraw your assignments until you achieve what you feel to be the proper compensation for perspective illusions.

In general the differences between your two drawings will appear thus: In the first, or conceptual drawing, distant forms will be larger than in the second drawing, and foreground forms smaller. There will be more foreground material, brought in from one side or the other of your field of vision, or from both sides, in order to fill the foreground space adequately. (A more systematic approach to this problem will be presented in a later lesson.) More of the tops and sides of things will probably show, as though they were seen from a little above or from the side, since your mental images tend to deal with the significant contours.

The accidental contours of your second drawing may in some cases present massive voluminar objects as quite flat, as though cut out of cardboard, and without tops or sides. Nearer objects may seem giantized at the expense of more distant forms. The whole may give the effect of exaggerated and distorted depth.

Exercise (b)

(1) Draw a friend in blocked-in form. Do not attempt a portrait or likeness, but pay attention to the relative sizes of the parts.

Pose the figure in one of these two ways: standing or sitting with a hand extended toward you; or lying down with feet towards you.

Draw from a distance equal to or greater than three times the height of the model. If possible make a second drawing from a distance noticeably greater than that of the first.

(2) Now make a drawing of the same pose from a position near the model, at a distance less than his height.

If the figure is standing or sitting with hand extended, pay particular attention to the size relation which appears to exist between the head and the hand.

If the figure is reclining, pay attention to the size relation which seems to exist between the length of the feet and the length of the head.

In the pose with feet towards you, the feet will appear inordinately large, as the hand in the other pose seems out of scale with the face.

It may be demonstrated by anatomical measurements that the average hand, from heel to middle fingertip, is about the length of the average face. Likewise, the average foot is as long as the average head.

By comparing drawing (1) with drawing (2), you will discover that the greater the distance between you and the model, the more true the proportions appear in the drawing. Optical distortions occur most noticeably between relatively near objects.

We see more nearly in true size relationships when we are not too near to the objects we draw. But since it is not always convenient to work in distant positions, we must reduce the optically apparent sizes of near objects in relation to far objects, and increase the sizes of far objects in relation to near objects, until the drawing corresponds as nearly as possible to our mental image of these things.

Part II · Assignment 3

Analysis of Pictures: Introduction

The compositional unity of effect produced by proper form conditioning may be most easily studied by means of an example. Let us choose a painting and demonstrate with diagrams the artist's treatment of forms within the picture.

Form-conditioning refers to the related system of adjustments of forms in a composition which are necessary for the purposes of expressiveness and pictorial rhythm. These adjustments or "conditionings" include correction of the exaggerations of perspective vision, emphasis for the sake of space and pattern rhythms, changes in the relationships of shapes, in the sizes and positions of objects and parts of objects.

Artists of all times have learned by studying the works of earlier artists. Those of one period or "movement" tend to select the qualities in other works which seem desirable to them, and perhaps to give these qualities more emphasis than the original artist intended. Some of the principles of composition which modernists emphasize were only implied in older pictures, as though their importance was but dimly realized by the older artist, yet they may be brought to light by the method of pictorial analysis.

The art student will do well to engage in this detailed study of fine pictures if he wishes to strive for the deeper satisfactions which result from a fuller understanding of pictorial principles.

Copying a picture, stroke by stroke, may or may not produce understanding of that picture on the part of the copyist. The camera cannot be said to understand what it reproduces, and the minds of many copyists are equally empty of knowledge about pictorial construction. One may succeed in reproducing the superficial effects of the painting he copies, while missing the spirit of the whole piece through subtle misinterpretations.

Pictorial Analysis

The method of diagrammatic pictorial analysis offers a good way to digest and "brief" the knowledge gained in close study of a good picture. The method is analogous to the process used by grammarians and rhetoricians, who diagram sentence and paragraph structure in order to show graphically how a literary whole is built up of its parts.

Many such methods have been applied by investigators to the study of pictorial composition and rhythmic design. A body of theory known as "dynamic symmetry," for instance, has its basis in an analysis of the proportions of Greek vases, and attempts to show that the same principles are fundamental to the planning of pictures. Contemporary painters say that this system of analysis ignores space effects, that it remains a method for surface layout alone, useful for achieving two-dimensional rhythmic relations; but that it controls in no way the space (or three-dimensional) rhythms whose proper handling will inevitably produce a rhythmic and unified pictorial construction. Many other systems of composition exist, but few are complete: they fail to take into account all the paradoxical facts of picture making.

A great original contributor to the study of modern composition, and the inventor of a good many of the diagrammatic methods of explanation used in this course, is the artist-teacher Hans Hofmann. His teachings have become so widely disseminated that many who now work according to his theories are not conscious of their debt to him. It is true that diagrams have been used to explain the construction of pictures since the times of the Italian Renaissance, and many researchers in art have contributed to their use. But there has never before been available such a comprehensive and fully rounded theory of picture construction as that developed by Hofmann in association with the leading artists of Paris in the decade before 1914.

Choosing a Painting

In selecting a picture for this kind of study, the student should avoid commercial illustrations, for the application of detailed analysis will often show them to be lacking in the values for which he is searching. This is not because illustrators are unable to make good pictures, but because there is a difference in purpose and a consequent difference in con-

struction between a commercial illustration and a work of fine art. The illustration is designed to catch the roving eye, please it for a short while and be discarded in favor of another. The work of fine art is painted with the idea of giving satisfaction to its observers over a long period of time.

You may demonstrate this difference in pictures for yourself by hanging one or two where they will be seen every day. Remind yourself to look at them each morning. Soon you will find it difficult to pay attention to a superficial, "easy" composition, while the more subtle or intricate construction of another will grow in its appeal.

To assign a high place in art to all the pictures of the "old masters" is a mistake as great as to refuse them any consideration at all. A painting is not good just because it is old. Some old pictures exhibit continued vitality for us, others do not. Of course the same thing is true of modern works; but if a picture has survived the successive criticisms of generations of trained observers, we are safe in assuming that it is worthy of study. If by analysis we succeed in discovering some of its basic principles of construction, we are closer to a knowledge of how to make lasting pictures for ourselves. The same principles are found in all good modern paintings.

The picture we choose to discuss in this diagrammatic manner is neither very old nor very new. Its creator was Giovanni Bellini, an artist of the fifteenth century who may be presumed to have summed up in his work a great deal of the knowledge developed previously by artist-scientists of the Renaissance. We select this painting because it is pleasing to most people who look at it. It is an accredited "old master," and may be said to be a "classic" work in the sense of representing a balance between extremes of thought and technic.

At first glance it presents no departures from the appearances of reality which might confuse the uninformed observer. For this reason some modern artists would distrust it as an example, on the ground that this superficial appearance of truth to nature would interfere with discovery of the abstract qualities of structure: in other words, that the illustrative, or story-telling aspect is too much apparent. However, we need not let that disturb us, because we shall soon get below the surface of this picture, and find that it is put together quite in accordance with what we understand to be the principles of conceptual picture making. We shall discover that it is an abstraction in construction if not in appearance.

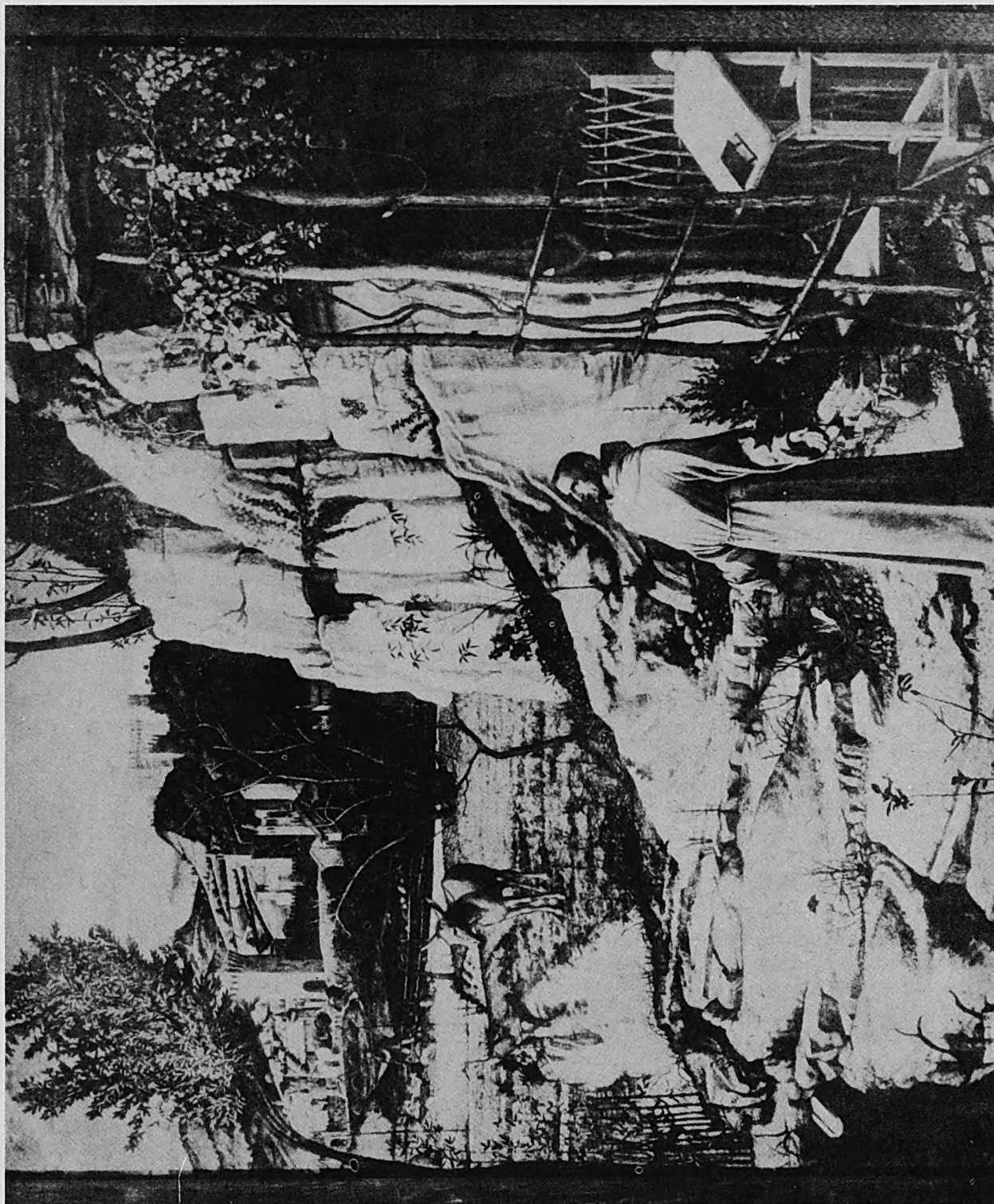
In the painting, which is called "St. Francis in Ecstasy," (see following page), St. Francis is depicted as facing the heavens in a pose of adoration. Behind him is seen his simple, ascetic monk's dwelling, a cave in the rocks. Why did Bellini paint St. Francis?

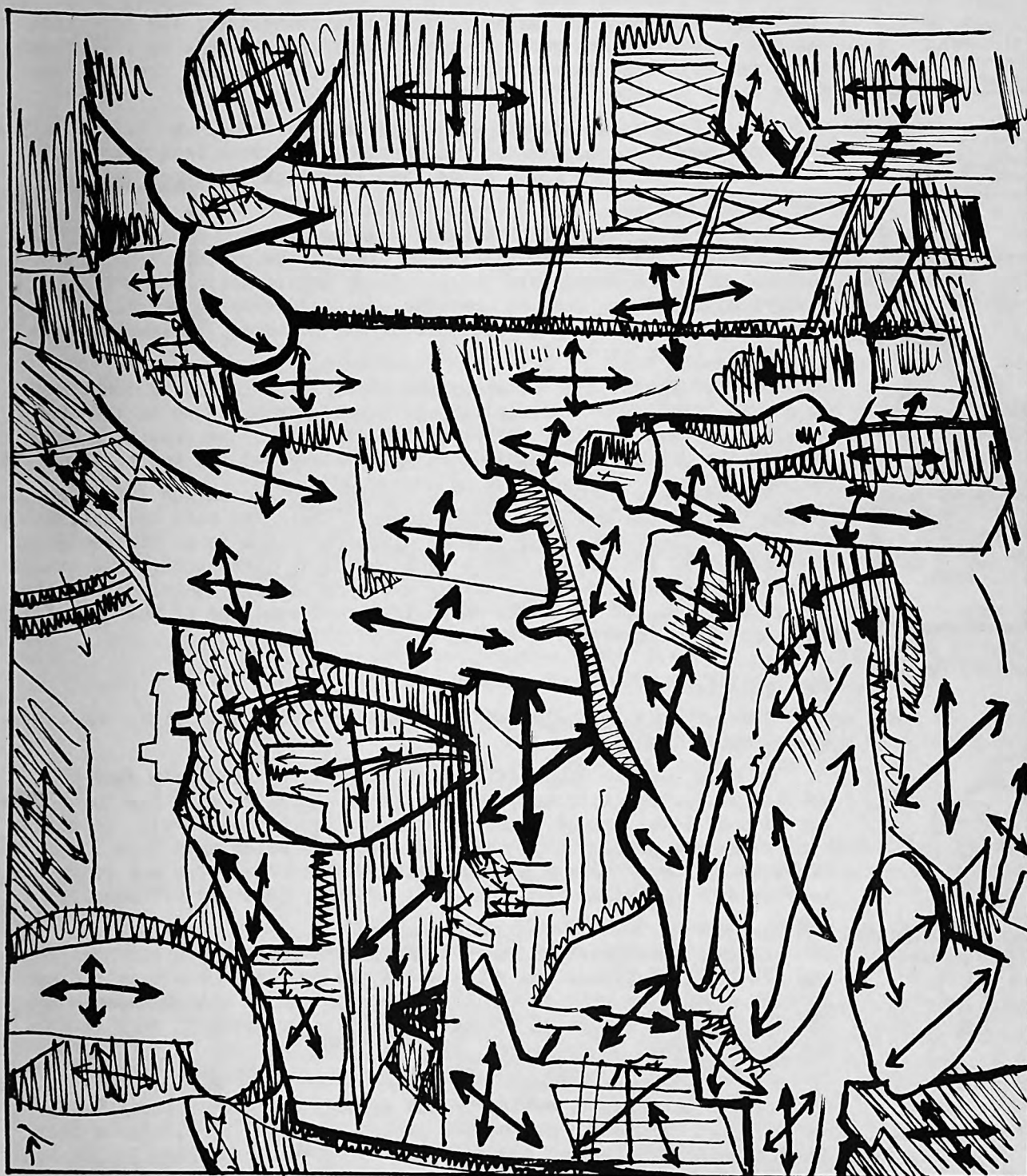
St. Francis was a figure of considerable importance in the Italian world of his day. His religious teachings were breaking down earlier prejudices against contemplation of the beauties of nature and the appearances of the material world. The art of painting, which had confined itself largely to abstract religious symbols, began to reflect the richness and beauty of the visible world, and works such as Bellini's, naturalistic in effect, became acceptable to the people.

This picture is notable, together with others painted by artists of the same group, for its richness and variety in color and texture, and its ornamental, decorative effect. These ingratiating qualities anyone may see, but the art student will be interested to look beneath the surface aspects to the fundamental structure, which must support the color and texture if they are to be effective.

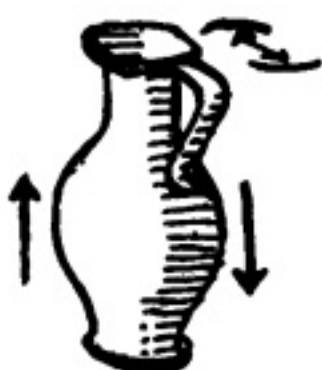
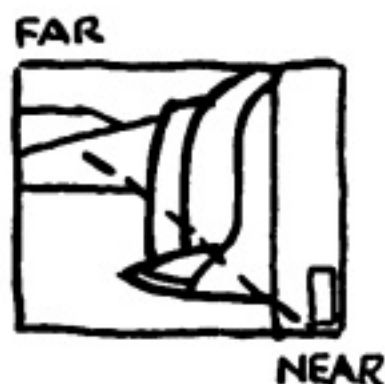
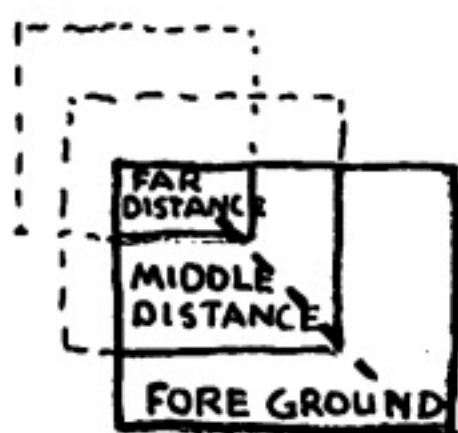
Space Order

First, let us abstract from the picture the chief lines, and relations between lines, which make for space and volume effects. A degree of condensation must be practised in finding these lines; that is, the meaning of a number of small lines or points must be summed up in one line for the sake of clearness and simplicity.

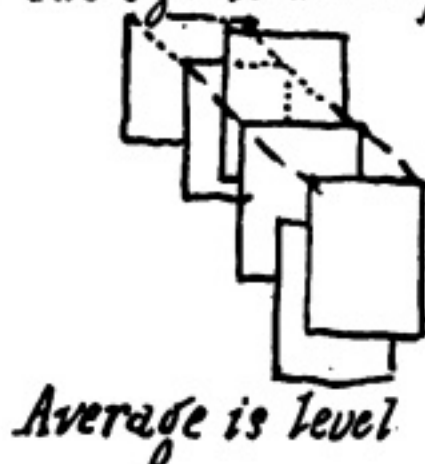




The Axes of the chief tipping and turning planes of the picture construction
This sort of analysis might be carried down to the direction of each individual brushstroke



*Part of picture
above Horizon*



By which points, lines, and relations between them, are the three-dimensional effects produced? (Review Part I, Assignments 2 ff., on first steps in space drawing. See especially Assignment 4, on space order.)

The most distant part of the picture is the sky plane to left. In the lower right hand corner we find a rectangular desk, the left side and front of which are seen. Between these two, we note many diagonal lines and relations between points and lines, which lead the eye from lower right to upper left, and vice versa.

The diagonal relationships leading the eye from lower left to upper right are much less emphasized, nor do they lead back into deep space or forward out of deep space as do the lower right to upper left diagonals.

The forms in the cliff face are seen as a series of overlapping planes leading from near right to far left of the picture, and the castles and hills behave similarly. Every detail which has a regular, recognizable form is seen to obey the space order which we call right hand space. (Note the jug just back of St. Francis. Review Part I, Assignment 7, on curves in space.)

Most of the picture is seen from above; that is, it is constructed below eye level. The horizon, or eye level, may be found in the area just below the top of the tower farthest to left. The remaining small part of the picture is organized in space above the eye and to the right.

We observe a certain amount of size-diminution in the three parallel sticks tied to the uprights of the bower. Their far ends are noticeably closer than their near ends to each other, but this is so discreetly adjusted that we are not disturbed by perspective distortion. The artist is telling us that the three sticks are approximately parallel, as are the cross pieces of the desk. Here is direct evidence of the use of compensated perspective.

The Level Line

(Review Part I, Assignment 11, Tension, Subjective Line, Subjective Space, and Volume.)

In a deep space composition such as this, particularly when the subject matter is landscape, it becomes necessary to know how to express the idea of level ground, and by contrast, ground not level. In this picture we may presume that the desk diagonals which move from lower right toward upper left are approximately horizontal. We may judge the levelness or deviation from the level of other lines by reference to these.

In many a composition there is no single form so conveniently marking the level of planes and lines which lie flat and recede into space. In such a case the mind of the observer must sum up all the space diagonals and take a sort of average. The average movement back into space, or forward out of space, displayed by the forms in a picture, will be accepted as level, and as the most direct space diagonal.

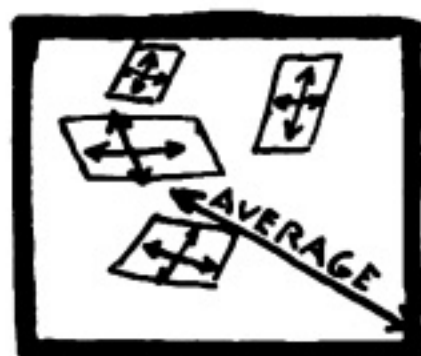
In our picture, this line of the average of movement back into space is not entirely a subjective line. It actually appears on many forms, as in the lines of the desk and the bottom crossbars on the bower. Note how many space diagonals correspond with this line: a subjective line between the eyes of St. Francis, the edge of the cliff bordering the donkey's field in the middle distance, the relation between the far and near shoulders of St. Francis. Even the subjective lines created by the stepping back of the textural rows of foliage and grass in the fields

agree with this chief space line. The axes of many curving forms in the foreground also work in agreement with it. (See Part I, Assignment 6.)

Not all the regular and irregular forms in the picture are so regimented, nor do all their axes and subjective relations correspond to the space line. Nevertheless, in a picture organized as this one is, the majority of them do follow the major space movement.

Variety, Unity, Monotony

Consider now the smaller number of lines and relations which do not exactly correspond to the level, but which do make space. Diagram (2) emphasizes such lines.



Notice that many of the forms are tipped and turned; that is, there are many deviations from the level and from the average movement back into space. These twistings and turnings add variety and interest to the picture. If they were in the majority, they would break up the unity of the composition unduly. If they were not there at all the excess of unified effect would produce a monotony.

Individuals and periods in art exhibit differences of opinion as to the amount of variety which they find pleasurable in art. All good pictures must be fundamentally unified in space and pattern, but for the untrained person the unity in many of them is hard to find. Simple people tend to like simple things, but any human mind enjoys the adventure of discovering unity beneath a surface variety. The right degree of variety is perhaps that which produces in the observer a pleasurable amount of activity in the effort to comprehend. If comprehension is too long defeated, however, the observer will retreat from what comes to seem monotonous chaos.

One cannot expect to like the more complex works of art immediately, any more than to understand the deeper aspects of scientific theory without study. Progressive development in appreciation is necessary for the fullest and richest esthetic experience.

The variety in our picture is on the simple side, and the unity is strongly emphasized. For that reason it serves as a very good subject for beginning the analytic appreciation of pictures.

Pattern

The next two diagrams emphasize vertical and horizontal lines, and such diagonals as move in a direction opposite to the chief space movement.

Vertical and horizontal lines, whether subjective or actually seen, emphasize flatness. They lead the eye up and down, or across from side to side of the picture.



Some of the vertical and horizontal lines. Subjective lines dotted

Subjective diagonals may exist between vertical lines, as between the supporting posts of the bower, the edge of the cliff and the towers in the distance. There may also be subjective pattern planes, as that between the figure of St. Francis and the curve of the odd shaped tree in the upper left; and that between the vertical of the figure of St. Francis and the verticals of the desk and of the edge of the dark shadow in the lower left corner. (See Part I, Assignment 14, Figure 2.)

Such planes are only partly enclosed by the outlines of related forms, only slightly indicated, as it were. Their existence and influence is felt rather than seen in the picture. Those which are parallel with the picture surface contribute to the flat, or pattern aspect, of a

spatial design. Those which move in a direction more or less in agreement with the space diagonal contribute to the spatial effects.

One may achieve the sensation of seeing through the imagined substance of these planes to the visible forms deep in the picture. Thus, even those planes which are parallel with the picture plane contribute to the force of the spatial sensation for the person who feels their existence.. It is as if the eye, after leaving the surface of the picture, had to penetrate forcibly a succession of resistant films as it moves back into pictorial space. When a feeling for such subjective, transparent planes has been developed, one may seem to comprehend the space in a good painting more consciously and positively than when looking into actual space.

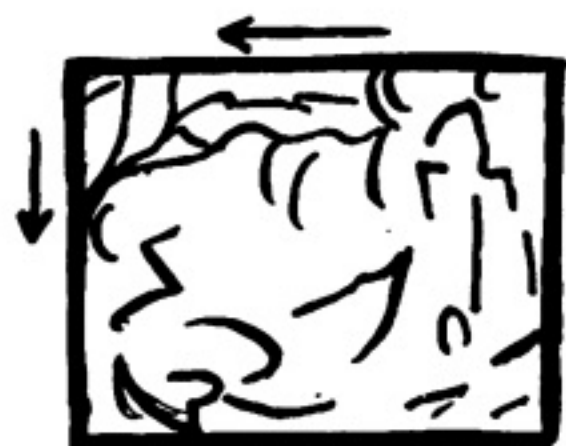


Some of the diagonals which contribute to flat pattern by countering the chief space diagonal

The second pattern diagram emphasizes diagonals which run counter to the main space movement. Beginning with the shadow back of the figure, we find a series of such diagonals parallel with each other. Notice the contrasted edge of the slanted base of the cliff, the axis of the donkey's body, the slopes of several hills, and last but not least the bent tree in upper left of the picture.

Circular Movement

Many theories of pictorial structure have suggested that the forms in a composition may be organized according to one of a number of simple figures: the square, the triangle, the circle, the cross, the S-curve. Moderns believe that any combination of these forms may enter into the organization of a good picture.



Some of the lines contributing to a circular movement

Within our picture, it has been shown that the verticals and horizontals produce rectangular relations. S-curves and many other accidental simple shapes and geometrical figures may be discovered. Many such forms exist in pictures, sometimes by accident only, but one should search for those which the artist has emphasized and used in a positive way for the construction of his space and pattern.

One of the commonest devices for keeping the eye within the borders of the picture is that of a circle movement of forms, mainly noticeable at the edges. In our picture this circular movement is introduced by the bent tree at upper left, whose unusual shape is explainable only for the purpose of leading the eye (which has followed the space line back into depth, to the upper left corner of the picture) again into the foreground and hence to further contemplation of the inner parts of the picture.

The carry-over from distant hills to tree is aided by a similarity in value which tends to diminish the contrast at the edge of the tree, and to allow the eye to pass easily over its border. This effect has been called a "passage." It is usually achieved by a softening of contrast at an edge between two forms.

In emphasizing circular movement in a composition the artist thus creates a sort of maze for the eye from which it has difficulty in escaping: the forms and spaces in the picture conspire together to keep the observation moving round and round the middle point, back into space and forward again, up and over and round about.

Note that the slope of the desk top parallels the diagonal axis of the bent tree. Observe how the circular movement is aided by the distribution of light on the right side and at lower left.

Notice that no form is allowed to lead the eye or attract it too strongly to the corners of the picture. See how many interesting obstructions occur as the eye approaches the edge of the picture, all leading inward or in a circular direction around the middle point.

Form-Conditioning

The tree is so markedly shaped to a purpose that it serves very well as an example of form-conditioning in the interest of circular movement.

The term "distortion" has been commonly used for the artist's practice of reshaping the contours of a form taken from nature, for compositional purposes or for more exact emotional expression. Distortion is defined as the act of "twisting into an unnatural or irregular form." This meaning has little in common with the pictorial process of controlling the forms of a composition in the interests of rhythm and expressiveness: a technical means analogous to the poetic license used by poets for the same purposes. Let us discard the word distortion, and substitute the term form-conditioning in this connection.

Exercise (a)

Clip from a magazine a reproduction of any work of fine art in which you are able to discover space order and pattern relations, and circular movement.

Include the reproduction in your work when you send it in.

- (1) Diagram the main space order.
- (2) Diagram the pattern relations.
- (3) Diagram the circular movement. Begin by marking the middle point, and consider everything in relation to that. (Review Part I, Assignment 14, Composition.)
- (4) Construct a diagram which differentiates between the main spatial movement and the diagonals which work against it.

Use dotted lines for movements which are felt or implied, but not actually seen in the lines or planes of the picture: that is, for the subjective movements.

Use the same vocabulary of arrows, brackets, dotted and drawn lines, and simple geometrical plane shapes, with which the Bellini picture has been explained to you.

Exercise (b)

Analyze a cheap pictorial type of illustration such as is available on a conventional greeting card or calendar picture. Use the same procedure as outlined in Exercise (a). Note any compositional weaknesses.

Part II · Assignment 4

Pictorial Analysis (cont.)

In Exercise (a) of the previous assignment it was noted that more foreground material must be brought in from one side or from both sides of a subject, in order to prevent foreground objects from appearing too large, and to fill the foreground space adequately.

It is evident that nothing would be gained by simply leaving more space between foreground objects which must be reduced in size to agree with the proportions indicated by conceptual drawing methods. To "giantize" the space between objects is as great a mistake in proportion as to "giantize" the objects themselves. Since all must be reduced in relation, more material must be brought in to fill the foreground plane, from one or both sides of the landscape as seen.

Satisfactory size relations between background and foreground forms may be achieved by a method which at the same time will fulfill the need for pictorial circular movement. Not all successful artists have thought out the problem in exactly this way, but it may be said that this approach comprehends most, if not all, of the foreground adjustments which appear in the works of skillful composers.



Concave Mirror Effect. Distortion at edges compared to no form change in center. Bad painting style because inconsistent.



Windmill or Whirlpool effect

A superficial circular effect might be achieved by drawing all forms in a picture as though they were seen in a concave mirror, or through a reducing glass. The image, of course, would be mechanically distorted, with the forms at the edges the most distorted of all, and those toward the center progressively less so.

The fault in this method of getting the desired circular movement lies in the fact that it produces unequal form-conditioning, which in this case may properly be called distortion. The resulting composition will lack inner consistency, or stylistic unity, which in turn will affect adversely the general effect of unity.

Although the study of such mechanically distorted images may suggest ways of modifying a form to suit its place in the movement of a composition, it must be remembered that truth to mental conception is our aim. To twist forms in accordance with a formula, without regard for their individual integrity and meaning, or for the space-pattern balance of the composition, is to fall into the same errors as those brought about by adherence to the rules of linear perspective.

This is not to say that forms may not be treated stylistically, for abstractions from recognizable objects may acquire an integrity and meaning of their own. (See the quotation from Plato, Part I, Assignment 9.)

If your picture presents the obvious kind of circular distortion seen in a concave mirror, the form-conditioning has been wrongly done. Such a composition often has an unfortunate whirlpool or windmill effect, due to overstressed and unbalanced movement.

Shapes throughout a picture should be subtly and equally conditioned in the interest of keeping the eye moving in a more or less circular fashion within the composition. This has the practical purpose of maintaining the attention of the observer upon the picture as long as possible. Proportions which might be indicated by linear perspective or by strict anatomical measurement should constantly be adjusted as the artist works, in the interest of circular movement.

The artist must maintain an impartial attitude toward all the shapes in his picture, so that they will be consistent with each other, the expression of a single attitude of mind. Michelangelo's statue of the sleeping figure of Night on the Medici tomb is a case in point. One femur (upper leg bone) measures seven inches longer than the other; but so many adjustments have been made in the creation of this beautifully composed figure that no single detail of form-conditioning stands out as an exception to the general proportioning.

This single attitude of mind should govern the style of every part of a composition. A picture in which some of the forms have been shifted and changed or treated more abstractly than others, will present an effect not of form-conditioning but of distortion.

This is a defect observable in many a so-called modern painting, where the artist has failed to apply the principles of form-conditioning in the interest of composition so that they pervade equally the spirit and structure of the whole picture.

The treatment of foreground forms has been approached in various ways by artists of different times and schools. Whenever the rhythmic qualities of a picture are among its excellences, some method of correction has been applied to the spreading effect of the optical appearance of the foreground, and its tendency to protrude from the picture.

Perhaps the commonest means for keeping the eye of the observer from becoming lost in an uninteresting and spreading foreground area is the use of what we shall call a leading shadow. Notice the great number of paintings and photographs in which a long shadow is cast more or less horizontally across an otherwise disturbing expanse of foreground. Occasionally we find a whole picture enclosed in such arbitrarily placed shapes. Sometimes the corners of a picture are deliberately darkened or lightened to obtain a circular effect; but this may or may not be effective, depending upon the amount of circular movement achieved in the arrangement of other forms. Such juggling of values often results in a monotonous "spot-lighting" of the central forms in the picture, with those in the corners subjected to an unwarranted reduction in importance.

Some early modern painters felt it necessary to float their rounded compositions in a sort of cloudy atmosphere, separating the composition from the borders of the frame. This vignetted effect may be logical when the picture must fit into an irregularly shaped format, as in combination with type on a page. Otherwise such treatment merely ignores the relation of the frame to the picture. It is little used today, for it indicates indifference to or misunderstanding of the formal conventions of art. Such "free" methods tend to detract from total rhythmic effect, in ignoring the necessity for an established relation between the picture and its format.

Some artists have been content to cut up the foreground into many small shapes, which are in better relation to distant forms because of the diminished size interval between them. These shapes are often conditioned to reverse the spreading diagonal outward movement of perspective construction.

Others have emphasized vertical relations, by placing forms directly or partially above others in order to create subjective vertical lines between them; or by drawing arbitrary verticals into a composition to tie the foreground into the rest of the picture.

Others have caused the size-corrected forms in the immediate foreground to be tied up with the forms of the background by endowing them all with a swirl or vortex movement. The works of El Greco, as well as those of a number of more modern painters, exhibit this compositional characteristic.

All of these devices are valuable to the artist. Let us see how all of them may be considered as parts of a single comprehensive method.



Corot: "The Road"
Leading shadows
across foreground



Prendergast: "North
River"
Small shapes
in foreground. Vertical
relations foreground to
background.



Boucher: "Forge of
Vulcan"
Spotlight
effect. Suppression
of corners.



Marin: "Schooners,
Maine"
Vignette
effect

Movement Effects Caused By Moving into the Scene, or Backing Up from It

In contemplating almost any composition which has dynamic qualities, or movement, it is possible to imagine walking into or backing away from its scene. To get this visual effect, seat yourself on the front of a vehicle, and as it moves, let yourself be conscious of the sides of the road flowing swiftly past you, while your eyes remain fixed on the center of vision. The forms in the foreground will be flowing out and disappearing down to right and left of you as you move forward.

To get the reverse effect, face the rear of the vehicle or sit on the back platform of the train. Here the forms will flow into the visual picture from lower right and left.

If we now apply the idea of right hand or left hand space, if, that is, we limit the field of vision to the part immediately to right or to left of us, we see that this flowing out or in occurs in a certain way for each of the four kinds of space: upper left, upper right, lower left, lower right. Following the principle that action and reaction must be equal, we may expect the background forms to take up an opposite movement in each case.

Let us apply this idea to picture construction.

Monumental Composition; Lyrical Composition

If we choose to place our composition in central space, we must deal with two vortices, one on the right and one on the left. These will counterbalance each other in the total movement effect. This kind of pictorial structure, so evidently balanced, is comparatively quiet in effect and is said to be static or monumental.

Works composed in this way usually function as central pieces in connection with architectural schemes. Altarpieces, and mural paintings which occupy central positions in large rooms or at the ends of corridors, are often so composed. Architectural decorations on the exteriors of buildings are often similarly designed, around the central vertical axis of a facade, for instance.

In contrast to the monumental composition is the less obviously balanced and more active lyrical composition. Here the counterbalance of movement exists, but it is freer. Right hand and left hand space are not balanced; instead, the subject is so placed in the field of vision as to emphasize one or the other space movement. The space diagonal is often balanced by a pattern diagonal only slightly less strong. In the Bellini picture, this pattern diagonal may be found in the contrasted line of grass edging the slanting base of the cliff, continuing in the crack in the cliff and along the lower edge of the hanging grapevine.

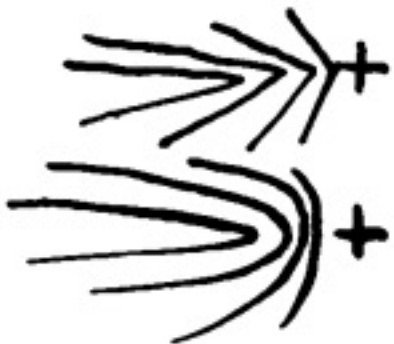
The Bellini painting lies mainly in lower right hand space. Let us see if the forms move in the direction we should expect if we walked straight into the picture on the left hand border of the format.

As we advance into the space of the picture, the forms flow downward and to the right, and would lead out except for the two-dimensional counterbalances of the composition. Notice the swirling ground forms at lower left, leading from left to right across the foreground. Observe the sequence of shapes at lower right, which turn the corner and push upward along the vertical poles, which are accented near their tops. This circular impetus is carried over the top of the cliff, and is given a final push by the two bowed trees at upper center. Then the tree at upper left takes up the movement, bringing it from the distant hills and sky down to the foreground again. All these forms, and lesser ones work-

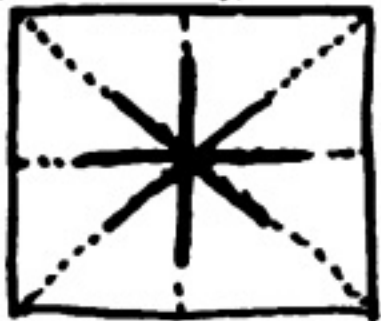




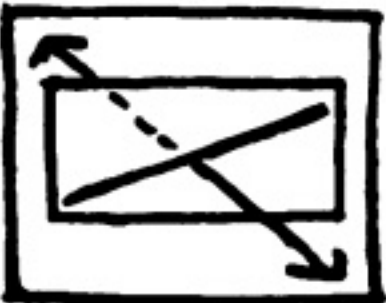
*Bellini "St. Francis"
Counterclockwise
forms and lines*



*Shapes which
lean away from
horizontal and
vertical axes of
picture plane are
dynamic in
pattern effect*



*Shapes which
agree with the
axes or diagonals
of the picture
plane are static
in pattern effect*



*Pattern diagonals
parallel picture
plane. Space diag-
onals penetrate
picture plane.*

ing with them, contribute to a counterclockwise movement which overcomes the tendency of the main space movement to lead us out of the picture.

Leading the Eye; Attention Points

Pictorial movement is not actual but implied movement. Like the space in a picture, it is an "as if," not to be confused with reality. It exists in symbols which may be interpreted as movement by the properly trained eye. What are these symbols?

A line, or a sequence of closely related shapes carrying out a subjective line, does not necessarily create movement. Unless it is especially emphasized for the sake of indicating the way the movement is intended to go, the line remains a track on which action may occur in either direction.

Along such a track, movement will take place towards the area of greatest contrast (contrast of color, of texture, or of line direction, as at the point of an arrowhead); or it will follow the axes of curves which press outward or inward. It will flow, also, along the lines of shapes which point, push or lean away from the horizontal axis of the picture plane.

The eye tends to follow a direction so indicated a little beyond the end or border of the drawn figure, as though it slid past the stopping place by sheer impetus, then paused, to be picked up by another leading symbol and carried on to another climax of contrast.

The path of the eye through the picture from attention point to attention point may thus be more or less controlled. Perhaps it is not strictly correct to speak of "the path of the eye," for presumably we are seeing the whole picture as this process goes on. It might better be called the path of the attention, which moves from point to point, resting longer on the contrasts.

The amount of contrast which is inherent in the abstract structure of a point of rest determines its visual weight or value as an attention point. This value is independent of any objective interest, although a novel or stirring object in a picture will also hold the attention. The representation of a human face, for instance, carries great attention value, over and above any importance given it by abstract structure.

Therefore, if the style of a picture is realistic, balance and poise may be attained only by taking into account both kinds of attention-value, weighing one against the other when necessary.

Counterbalance and Poise

It is an aim of classic composition to achieve variety within unity, in space pattern as well as in surface pattern. In a final analysis these are two aspects of one thing. Lasting interest in a work of art depends not upon subject matter, but upon the degree of rhythmic unification of its various parts. A well conceived, well executed work is like a living organism in dynamic unity; its life may persist long after the meaning of its forms has been forgotten.

To achieve organic life, a composition must express a total effect of poise, of delicate balance. All movements must be counterbalanced by other elements. The space movement, whether actually drawn or expressed subjectively by plane and line relations, must be counterbalanced by pattern diagonals in an opposing direction. (Figure 1.)



The fact that pattern employs two dimensions, and space only one, is usually overlooked in discussing space-pattern balance. With a given space effect, symbolized by a line of given length and strength in a diagram, twice as much pattern strength is required for balance. Reducing a composition to three lines, representing space effect, vertical effect, and horizontal effect, respectively, we find that balance occurs when:

- (a) Verticals, horizontals, and space lines are of equal strength.
- (b) Horizontals are double the strength of space lines, vertical effects are negligible.
- (c) Verticals are double the strength of the space line, horizontals are negligible.

Circular Versus Spherical Movement

A composition which one may walk around, such as a work of architecture or a piece of sculpture, or a composition which turns itself before the eye, as one of Alexander Calder's mobiles, may be organized with no reference to the pattern effect of any single view. In fact, such reference will probably detract from rather than add to the unified effect of a composition in three dimensions. A work of this kind should be organized spherically, so that it is not complete from any one view. It is rather like a planetary system.

On the other hand, a drawing or painting must present its space effects in terms of two-dimensional pattern. It must be seen entirely from one direction. Every effect which is to register in the total of the picture must be faced or pointed in the direction of the picture plane, and the "as if" volumes and spaces built in relation to the picture plane alone. Pictorial space has been called "closed space," because it is the expression of the essentially two-dimensional quality of visual sensations. Another term for it is "equivocal space," because for each excursion into depth there is a compensating return to the picture plane.

It is a mistaken use of space effects, therefore, to create an illusion of depth, or even an illusion of abstract forms moving in actual depth. Pictorial organization in terms of two dimensions must not be confused with sculptural, spherical organization.

Compare, for example, the difference between a performance on a stage with proscenium, in which all gestures must be directed toward an audience on one side of the actors, and a performance in an arena, where the audience is on all sides of the stage. The conventions of acting which suit one case will not suit the other. Neither will sculptural conventions suit painting, nor painting conventions do for sculpture.

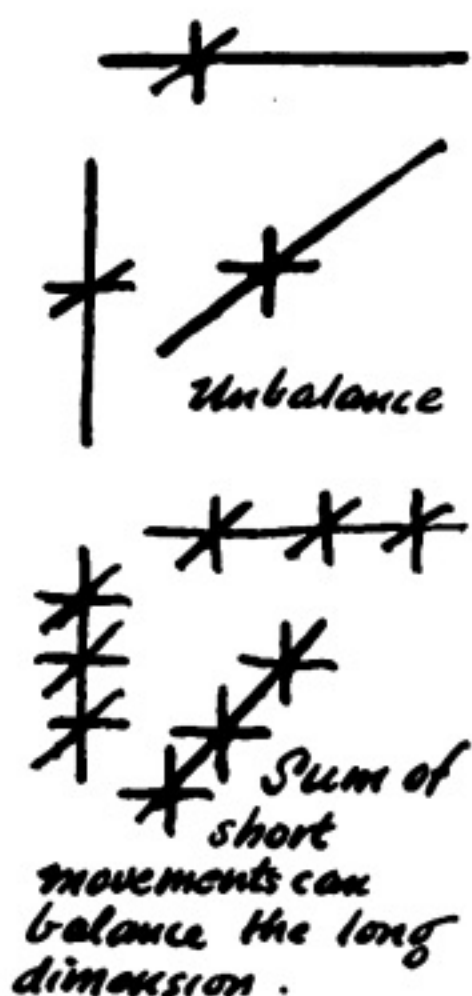
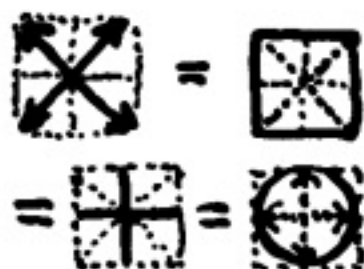
A drawn copy of a good piece of sculpture will not be a work of art. To become one, the drawing must reinterpret, in terms of drawing, the relations of forms of the sculpture.

Balance

Overemphasis of horizontal movement at the expense of either vertical or space movement, produces an effect of unbalance. (See figure.) Likewise an overemphasis on space movement disturbs the balance of the picture plane as a whole, and destroys its decorative, ornamental effect.

The symbols for the third dimension must be balanced by the pattern to achieve poise. When this is accomplished, we feel the delicate balance between forces: the spatial elements of the picture which lead us into it, and those which keep us out of it in a contemplative position, the pattern elements.

A pattern diagram has same two dimensional balancing effect as a combination of vertical and horizontal.



The most effective expression is balanced, rhythmic expression.

Conditioning Forms in the Interest of Circular Movement and True Size Effect

Exercise (a)

Place a vase, jar, jug, or bottle on the floor so that it is seen against the line between wall and floor. As far in front of it as its distance from the wall, place a row of small objects in a line parallel with the wall and equidistant from each other. Matches, or small objects like sugar lumps will do.

Take up your drawing position, as shown in the diagram, far enough away so that your field of clear vision includes all of the vase and most of the matches. The vase should be in right hand space, so you must keep your face parallel with the wall and with your paper, moving only your eyes to see the subject. Let the middle point of the composition lie within the vase itself. (See the plan diagram for proper arrangement.)

Now, looking at the middle point of the vase, thrust your head forward, toward the wall. Notice how the small forms in the foreground seem to move to the right as you do this.

Notice also (with your head in the forward position) the line between wall and floor as it passes behind the vase. The left portion of this line is nearer you, and the right portion farther away in spite of the fact that both are parallel to your face. How can you express these paradoxical facts in a drawing?

If you have placed everything correctly, you will notice that the wall-floor line meeting the vase at left seems somewhat lower than the wall-floor line at right.

If a transparent pane of glass were placed before you in your fixed position, you might trace this line upon it, beginning directly in front of you and moving to the right past the vase. You would find, probably to your surprise, that this line which you know to be straight comes out on the glass as a curve.

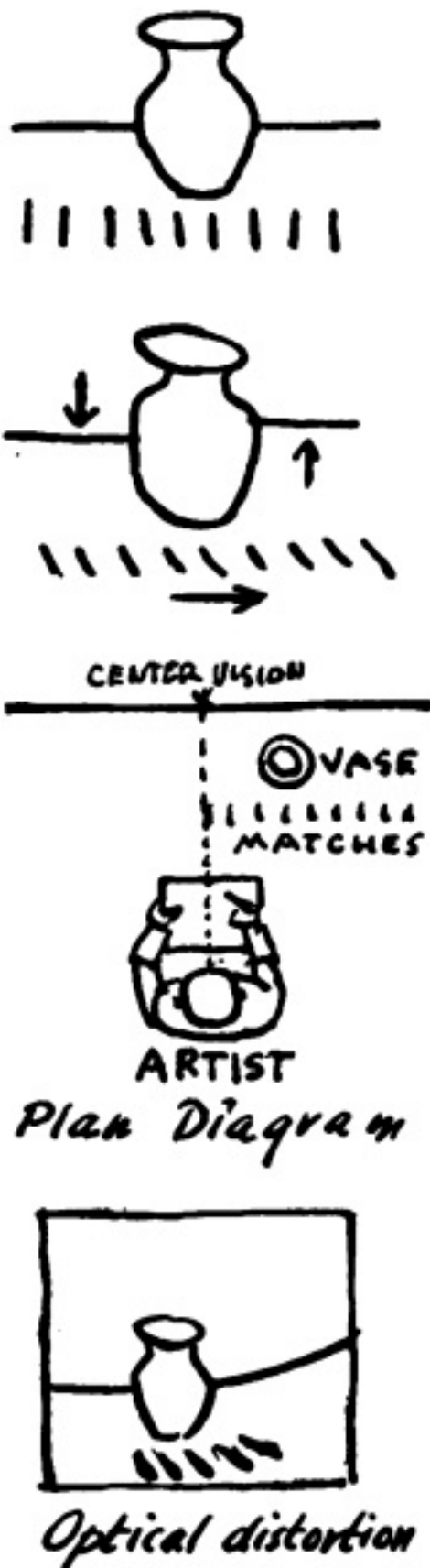
Try this observation out on a window overlooking a fence which is parallel with it and straight. If you will trace the line of the fence on the window far enough to right or to left of your center of vision, the trace will be a curved line. This is due to the construction of your eye, and is another instance of the distortion of optical vision, of which we ordinarily take no notice because our minds automatically correct such illusions.

We really see straight lines as straight only when they are directly in front of us, level with the eye, or exactly divided between right and left hand space.

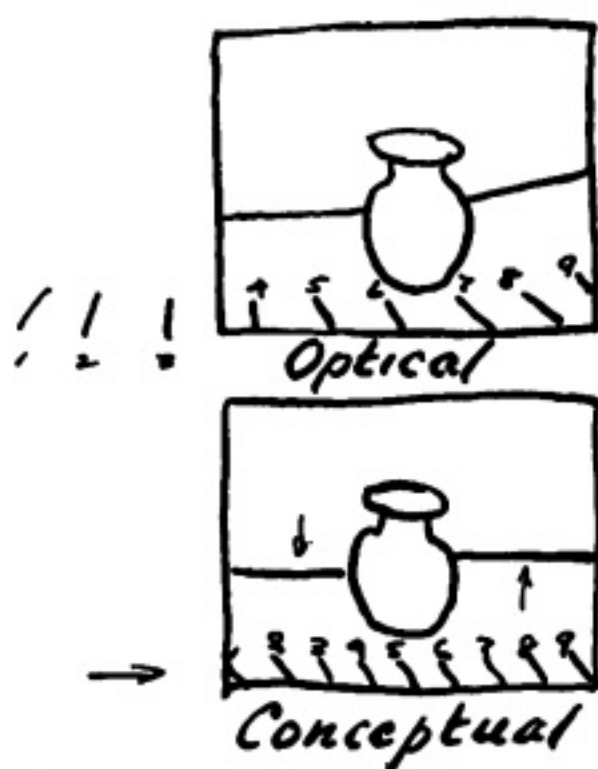
At this point you had better review Part I, Assignment 7, Curves in space, paying particular attention to the drawing of the bottle in right hand space below the eye, the conditioning of the ellipses, and the up and down position of the shoulders.

Now begin to draw freely, in outline, with no attention to shadow forms or textures at first, working to get the proper adjustment of all the factors we have noted here.

First, the area of clear vision should approximate the sheet of paper. Then the bottle may be drawn in lower right hand space, with the middle point of the bottle corresponding to the center of the paper.



Then add the floor line, drawing it as a straight line parallel with the horizontal of the paper (which we know it to be), but with the right half shifted up on the format to express the fact that it is further away. This is the commonly accepted resultant form for such a line, taking into account all the forces affecting it.



Look now at the matches. You do not wish to show them too large in proportion to the bottle, nor do you wish the spaces between them to look too wide. Therefore you must move more matches into your drawing from the left, in accordance with the left to right foreground movement which occurs in lower right hand space.

Sit back now and study the total movement effect of your outline drawing. You should find that the shiftings and conditionings work together to produce a circular movement in a counterclockwise direction, like that in the Bellini. Your vase or bottle should be drawn like the vase behind and to right of St. Francis. You should find that the relative sizes of the matches and the spaces between them produce no false and exaggerated size effects.

This is a very simple diagrammatic interpretation of a rather oversimplified subject. Your drawing will have little of the variety and complexity of the Bellini, but it will have been constructed in the same way.



Exercise (b)

Add other forms, such as draperies, etc., to your still life subject, arranging them to appear accidental, but keeping in mind their usefulness in furnishing material for leading the eye rhythmically in the composition.

Draw the subject again, finishing it up as a monochrome watercolor, and attempting to carry out in detail the ideas presented in this assignment.

Arrange to emphasize the circular counterclockwise movement by judicious form-conditionings, and to balance this movement against verticals and horizontals.

Emphasize values so as to create a diagonal which will counter-balance your main space diagonal.

Exercise (c)

Clip from a magazine a reproduction which seems to you to embody these principles. Analyze it in diagrams like those which have been used in explaining the composition of the St. Francis painting to you.

Part II · Assignment 5

Landscape Drawing and Composition

Introduction

You have presumably done considerable outdoor sketching by now, in applying the instruction of Assignments 14 and 15, Part I, and are aware of the general conditions of such work and the special difficulties involved. The weather as well as the light are continually changing, and over a short period of time the colors and textures in a given view can alter surprisingly. An hour and a half or so is often as long as one can work on a given subject on any one day. This will be true even in calm weather because of the change in the position of the sun. On dull days the light may remain constant for longer periods, unless there are moving clouds.

Extended work out of doors may become uncomfortable unless the artist is properly clothed, and provided with an umbrella or other source of shade, and an easel. Very often the location which gives the most desirable view of the chosen scene is not that in which it is most comfortable to stand or sit for work.

If you live in a temperate climate, the additional materials necessary for working out of doors may be very simple. You will need hardly anything, in fact, but a folding easel. By placing this easel so that the direct sunlight does not fall upon it, or falls upon it from a great angle, you will avoid the eye-straining effect of a white sheet of paper too brightly illuminated.

The use of the easel permits you to walk away from your work, and to view it somewhat as it might appear on a wall to an observer. It must be remembered, however, that illumination is apt to be so very much greater out of doors, even when the picture surface is shaded, that one must be prepared to make adjustments in value relations when the drawing is brought indoors. The values with which one tends to work outside are generally too closely related for the dimmer light inside.

For working in bright sunlight, a painting umbrella is almost a necessity. You may be fortunate enough at first to find a place to work where shade will fall on your easel; but this will happen seldom, and your choice of subject matter will be seriously cramped if you depend upon natural shade entirely. A painting umbrella is nothing but an opaque umbrella of any material; fastened to a sharpened stick or rod which may be thrust into the ground. The height of the umbrella upon the stick should be adjustable. The sort provided by dealers in art materials is lined on the underside with black or dark green material, and covered with white on the upper side to reflect light and heat. The painter may improvise his own by tying an ordinary black cotton umbrella to a sharpened stick. Extra bracing and tying may be necessary for work in such places as a windy sea coast.

The easel for landscape work should enable you to place your format vertically before you, at eye level or just below. It too may be made quite simply, although suitable easels are available at reasonable prices. If your easel shows a tendency to blow over, try hanging a heavy stone from the easel head by a cord.

Charcoal and crayon are very good media for black and white work out of doors, and when one is sure of one's intentions, monochrome watercolor is excellent. For such work, although the manila paper of your pad may be used, charcoal paper is better. It will be adequate for either charcoal or crayon, or for monochrome watercolor.

Either manila or charcoal paper, for use with watercolor, must be stretched to prevent buckling. Watercolorists habitually stretch their paper to their boards, even when they use heavier and more expensive kinds.

Stretching Paper to a Board

Be sure that the board is larger than the paper. Have ready gummed paper tape of the sort used for sealing cartons, enough to tape down the four sides of your paper, cut to the proper lengths.

Dampen the entire sheet of paper by laying it on a table and sponging it evenly with water. Let the paper absorb water until it swells. When it has expanded as much as it will, pick up excess water with a soft cloth or sponge, especially at the edges, and lay the paper in position on the board. Dampen the gummed tape, one length at a time, and place it on the edges of the paper. The tape may be of any width from an inch to two inches. It should cover no more than a half inch of the paper edges.

Press the tape down firmly until it adheres well to both board and paper. If the paper has been left too wet at the edges, you may have trouble at this point. Replace any piece of the tape which has become too thoroughly wet to stick well.

Once mounted, the board and paper should be put aside in a dry place, not too warm, so that it may dry slowly. It will shrink as the moisture leaves it, and be stretched quite tightly to the board. There will be no wrinkles if the tape has adhered firmly all around the edges of the paper.

It is easy to make the mistake of beginning to tape the paper down before it has fully expanded. The continuing expansion buckles the adhesive tape, and loosens it in places from the board and from the paper. After the sheet has dried and contracted, such places will pull loose.

It is worth while to practice and master the technic of mounting paper, whenever the job to be done requires the use of watery materials which may cause a dry sheet to buckle. Each sort of paper will act a little differently from others, so do not be disappointed if you are unsuccessful in your first attempts.

Paper mounted in this way permits accurate work with the brush or with a point. It allows freedom as well as precision. Mechanical draftsmen mount detail paper for careful pen work; architects and watercolorists mount various types of paper for rendering and watercolor painting.

After the "stretch" is thoroughly dry, it may be worked on. When the drawing is finished, it is removed from the board with a sharp knife or razor blade, by cutting through the tape at the edge of the paper. The remaining taped edge of the paper may be trimmed off, or hidden by a mat or frame subsequently applied to the picture.

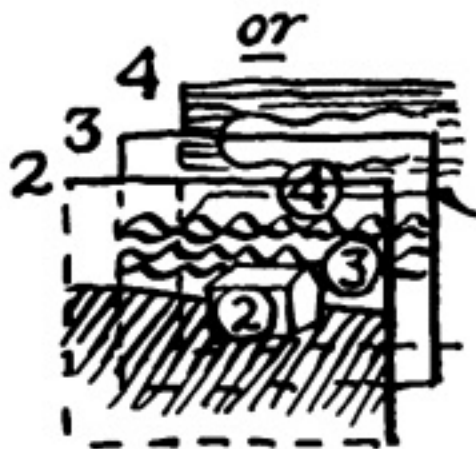
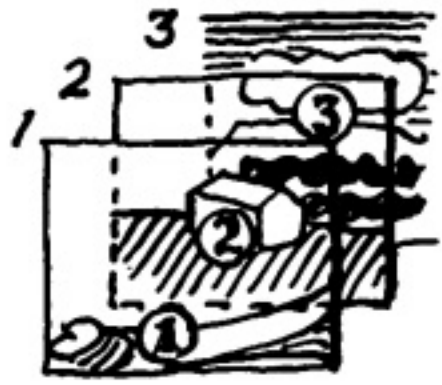
You are now provided with an easel, a purchased or homemade painting umbrella, charcoal, black crayon, and full-sized pad paper thumb-tacked to a board; and are ready to sally forth. If it is sunny, take a big hat with you; if cold, extra clothing. Painters in cold countries often work with brush or pencil thrust through the fabric of a wool sock drawn over the painting hand.

Decide upon a spot where you have worked previously with your sketch book, proceed directly there, and without too much distracted wandering about or looking, at the last moment, for a more interesting subject, set up your apparatus. Be grimly determined that nothing shall divert or disturb you. Courage and resolution at this point are absolutely necessary.

Choose the middle point of a subject previously decided upon by consultation with your sketch book, mark it on your paper, and start to work with your charcoal, working very lightly at first until you have indicated the chief forms and areas.

The drawing which is to be turned in should be finished up in black wax crayon or lithographic crayon, Blaisdell pencil, or a similar non-rubbing, black crayon-like medium, but you may make your preliminary lines in charcoal. These may later be removed with a chamois or washleather. Do not attempt to mail charcoal drawings, for they will smudge hopelessly with handling.

For your first drawings in landscape composition, concentrate on blocking in.



or



⊗ = middle point

A composition in deep space becomes disorderly and lacking in rhythm unless the relations of objects in the near, far, and middle distances are well planned. Look at your view. Is the most complex assemblage of forms (and hence the chief visual interest) near at hand, far away, or in the middle distance? It may be in any of these positions, but often it falls in the middle distance. Since you are likely to be most interested in this complicated form or combination of forms, you may forget that the chief plane of interest must be related to the other planes in depth. You cannot have a "star" without a good supporting cast.

The chief plane of interest must be balanced with minor interests at other depths in the picture space--forms which are not so eye-catching, but which have nevertheless some attention-drawing power. If you fail to create interests both near and far, and build an evident relationship between them, your composition will lack depth. The depth plane upon which lie the most interesting objects will then become, in effect, the whole picture; the composition as a whole will not be sufficiently complex in depth to retain interest and attention.

The power of a landscape composition to hold interest lies largely in the creation of tensions and rhythmic relations between the parts of the picture which appear upon the various planes of depth. The forms in the picture may be related to two, three, four, five, six, or even seven such depth planes. More would probably create confusion; one alone would allow a good study, perhaps, or a good poster, but not a good landscape composition. Three or five planes are commonly used.

A composition must have foreground interest, middle distance interest, and far distance interest. These areas may be considered as three vertical planes.

The foreground in the picture should begin at a sufficient distance to avoid serious perspective distortions. Just where this point is will be decided by the nearness or farness of the middle point upon which you decide.

The middle point will be somewhere near the middle distance plane. If you are dealing with the greatest possible distance your middle point will be halfway to the horizon. If your far distance plane is closer, as it would be, say, when a row of nearby hills or woods interpose themselves between you and the distant sky, the middle point and foreground will be somewhat nearer. The foreground seldom begins less than twenty feet away from you if you are looking at a middle point near the horizon. (Review Part I, Assignment 3, on the area of clear vision.)

A great deal of your composition is decided upon by your choice of the middle point. The same subject, organized successively around two middle points, will produce two very different compositions.

Your first efforts at landscape in your sketch book will have impressed upon you the difficulty of avoiding perspective distortion when working in terms of deep space. Your foreground, if its size appearance is copied, will dwarf the size effect of large objects in the middle and far distance. Roadways running toward you have a way of widening out into immense expanses which can become meaningless wastes in the picture composition.

To avoid cramping the size of objects in the distance, and "giantizing" objects in the foreground, it is a good idea to walk to the chosen middle point, if possible, to get an idea of the size relations from there between objects in the foreground and those on the far dis-

tant plane. Then, in your drawing, modify the perspective distortion until the size relations appear psychologically right. (Review Part I, Assignment 3, on this subject.)

In choosing subject matter, avoid scenes which remind you of paintings you have seen. A "picturesque" subject is usually one which has been the subject of so many paintings that it has become hackneyed, and you will be unable to see it in any fresh way. Choose instead a view which does not immediately suggest a picture to you, but in which you discover one after close examination and some preliminary experimental sketching.

The forms in a landscape subject may not have very evident rhythmic relations in either two or three dimensions; but remember your freedom to move and compose them until their rhythmic relations do become evident. (See Part I, Assignment 11.)



or



Not only may you shift the pattern arrangement of the forms, but you may modify their sizes, and emphasize or reduce their twisting and turning movements. You may tie the forms together with unifying planes of light and dark or texture, or separate them by contrasts of the same elements. You may arrange light and dark with all the freedom of a theater electrician. Clouds in a sky are apt to cast almost any sort of dark-light pattern, and you may use any one which seems useful to you, even though the clouds may not be creating it at the moment.

Although the photographer of landscape is limited to recording pictures which nature has made for him, the painter may create pictures by rearranging the elements given him by nature.

Exercise (a)

Find a landscape in which the forms seem to be capable of convenient arrangement on a three-plane depth scheme.

Find another in which five planes of depth seem to be needed.

Diagram these landscapes, showing planes of depth, space movement from front to back, and blocking out the forms of the compositions as you blocked out the rock for Assignment 10, Part I.

(1) Turn in one of these drawings in outline form, with overlapping.

(2) Turn in the other with a dark and light scheme added.

Drawings (1) and (2) should be executed in crayon, black and white, the full size of the pad sheet.

(3) Stretch a sheet of paper on a board, and render (2) again in monochrome watercolor. Turn in the result.

Part II · Assignment 6

Landscape Drawing and Composition (cont.)

Space Effect vs. Space Illusion

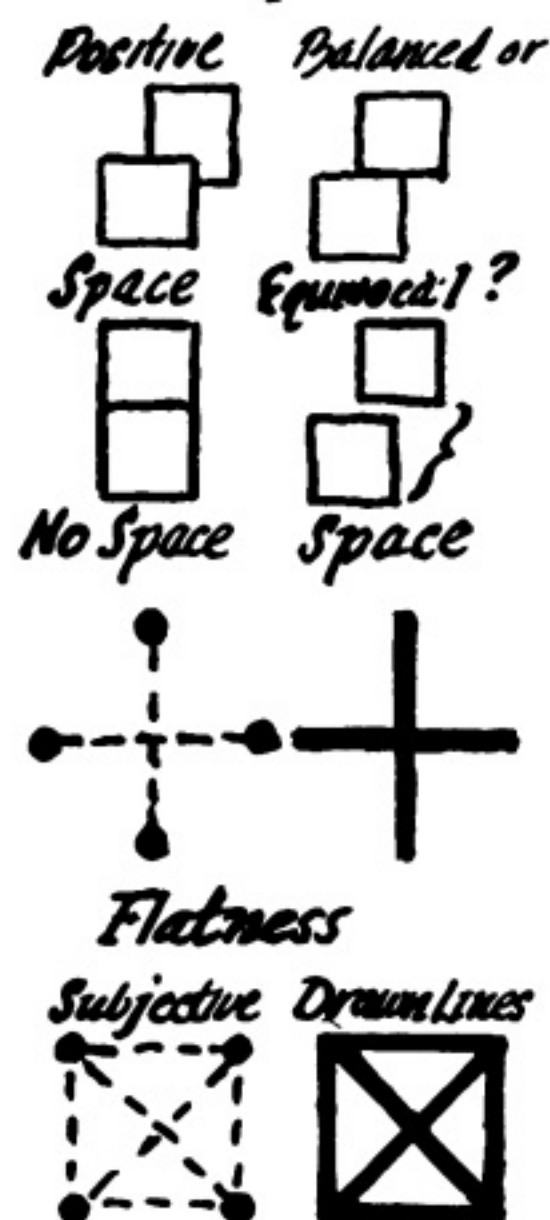
You were cautioned in the preceding assignment to avoid exaggerated and distorted perspective effects in a composition: to try to draw objects in the foreground and the background in those size relations which will enable the eye and mind working together to understand the true sizes of the forms.

Actually, landscape painters in the past have varied considerably from this aim of a balance between the optical appearances of objects in perspective and the rendition of their true sizes. During certain periods in the development of art, the highest value was placed upon a drawing or painting which created a complete space illusion. A picture was not something which hung on a wall or functioned as part of the wall surface; it was a sort of imitated window or niche. Such paintings were used to create the effect of openings in the walls of rooms.

However, this sort of drawing and painting has been much in the minority during the whole of the history of art. It has had special uses: as an aid to the scenic designer who must get the effect of great space within the limits of the stage structure; to the church architect, who was ordered to make the inside of his dome seem to open up into the vault of heaven; or to the architectural sculptor who, for reasons of expense, was forbidden to carry out his creations in actual sculptural materials. This last factor accounts for a great deal of the illusion painting in the Italian churches of the Renaissance period, the famous Sistine Chapel of Michelangelo among them. Some of these architectural decorations were even begun as sculpture, and finished up as painting simulating sculpture.

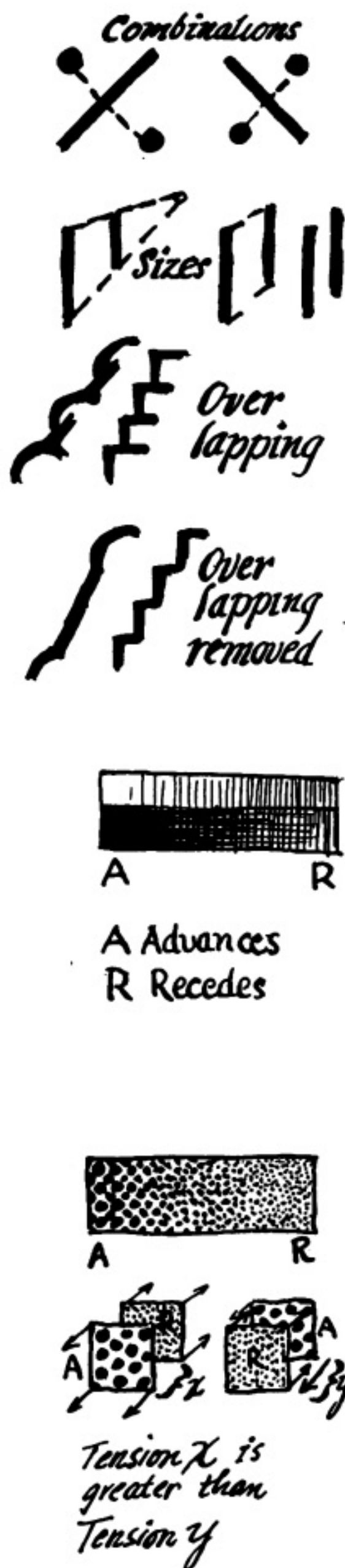
The illusion of deep space in painting is achieved by emphasizing all factors which make for space effect, and minimizing all factors which make for surface decoration, or pattern. A painting constructed in this way is usually out of place on a wall unless definitely built into the architectural scheme. Hung without regard to its space effect, it may seem to destroy a wall surface carefully planned by architect and interior decorator.

On the part of the informed public, there has been a general rejection of illusion painting for use in the home. This prejudice has spread to the larger and more imposing sorts of art work, particularly those in oil, even though some examples which are partially balanced in their space effects might fit the smaller and more intimate dwellings of today.



On the other hand, interest is increasing in freely painted watercolors, etchings, woodcuts, lithographs, drawings, tapestries, and other pictures which, by the nature of the media in which they are created (in spite, perhaps, of the way in which they are composed), do not produce extreme space illusions. The naturalistic oil painting usually finds its way into attic or cellar, or into a museum where it is treasured as a relic of days when different tastes in wall decorations ruled.

There is no reason why painting in any medium cannot be so controlled as to produce a balanced space effect. The artist need only analyze the subject at which he is looking, and which he wishes to paint, to decide which of the things about it create the effect of depth, and which create the effect of flat pattern. Any vertical or horizontal lines or suggested lines or subjective movements; any planes which face him; any arrangement of the individual spots, or attention-drawing factors of the forms in his picture, which suggest vertical or horizontal relations or tensions: these build up the idea of decorative flatness. A style of drawing which avoids the use of diagonal lines, or which carefully balances diagonal lines with equally strong diagonals which negate them, tends to produce the same effect.



In addition, any reduction in the perspective illusion (the recession of sizes as they step back into space) will minimize depth effect. We know that the overlapping of recognizable shapes is our most positive tool for building the effect of space. Consequently, if overlappings are partly or entirely eliminated, our forms will take on the aspect of flattened shapes, approaching the effect of cutout cardboard silhouettes.

It is probably as impossible as it is undesirable to make a drawing which is completely devoid of space effect. Even the most casual scrawling is apt to produce certain relations of lines and spots on the surface of a format which have space meanings, however unintentional.

It is possible to control intelligently and to balance the effects of space and pattern. Certain contemporary artists and teachers of art use the term closed space to refer to the space effect of a picture in which this balance exists. There are many degrees of space closure. Some paintings are as shallow in their space effects as a carved base-relief, and others present considerable depth; yet both may be closed or balanced, so far as space and pattern are concerned.

It is not possible within the limits of this course to discuss color as it affects space and pattern; but it may be said here that color areas in themselves, apart from their shapes, have a subordinate influence on space balance, although their effects are subject to and controlled by drawing. Since we have learned to use values, we may apply this one aspect of color: contrasted values tend to "advance" in a picture, to seem nearer to the picture plane than do values without contrast. Where black meets white, that point or edge will come forward in space unless other elements in the drawing are holding it back. A reduction in value contrast causes the points affected to recede in their relation to more contrasted points, lines or areas.

The same principle holds true in textural relations. A coarse, rough texture, perhaps due to the size effect of its particular dots, tends to cause any area upon which it lies to advance. But if the outlines of the drawing are holding it in its place in the picture, if it is securely locked in its proper position, it may advance only within the limits allowed it by the drawing.

The idea emerges that, if the drawing is well and firmly constructed, one may have considerable freedom in the use of color and texture without much disturbance of space effect. This you will find to be true. Color and texture may be used chiefly for their ornamental, emotional, or other qualities in a painting whose areas are properly related and controlled by the drawn outlines.

The greater the emphasis upon recognizable geometrical shapes in the drawing, the greater the freedom one may have in the use of full and intense colors without fear of disharmony. Of course, geometrical shapes may be used with more or less subtlety, and styles in good drawing vary widely in this respect, but the geometrical controls must be there if color is to be used freely and emotionally without too much concern about its space effect.

Exercise (a)

(1) Draw one of your blocked-in landscape compositions again, in outline. This time, attempt to reduce all the elements which make for depth to a minimum. Move the planes around and change their sizes until they fit together in an almost flat pattern, and appear rhythmically related in two dimensions, with very shallow space relations.

Perspective illusion should be minimized as much as possible. Your aim should be to get a picture which looks as if it were made up of cut-out pieces of cardboard, laid upon each other.

Be consistent. Do not allow any more depth to appear in one place than in another. Remember, in the final effect there must be a little depth everywhere in your picture, but the pattern must be by far the stronger. Let the average length of the diagonal relations and tensions be shorter than the average length of the horizontal and vertical relations and tensions.

(2) Now try the same composition, this time increasing the depth relations somewhat, but keeping the sizes of the forms about as they were in (1). The chief change will be an increase in the diagonal movements, and perhaps in the number and extent of the overlappings.

(3) Paint the first drawing in monochrome watercolor, using values with the idea of increasing space effect (i.e., contrast in foreground, lack of contrast in background).

(4) Paint the second drawing in monochrome watercolor, using values to minimize the space effect (i.e., lack of contrast between foreground elements, strong contrast between most distant planes).

Part II · Assignment 7

Landscape Drawing and Composition (cont.)

Blocking-in

In this study of landscape composition we have developed an approach to the problems of deep space by means of diagrams.

It is most important that you practice the blocking-in part of landscape drawing until you are fairly fluent in such matters as deciding upon the space movement of your composition (whether left hand, right hand, or central; below, or partly below, and partly above, eye level), finding the middle point, and balancing the various volumes and spaces involved about this middle point. All the information given you in Part I about space direction, tensions, rhythmic relations, and size relations should be carefully reviewed and applied to this new and larger space problem. (See Part I, Assignments 4 ff.)

Only two drawings are required for this assignment, but before you do them be sure you have practiced the process of preliminary blocking-in, so that that part of the drawing will not bother you too much. All effects of texture and color, and all successful detailed drawing of the forms within the larger planes of the composition, depend upon the correctness of your preliminary structure.

The blocking-in part of the pictorial process is equivalent to construction of the foundation and structural timbers of a house. Although the blocked-in lines may appear only here and there in the finished structure, they must be there and in the right places if the structure is to bear the weight of the superficial details.

A drawing improperly blocked-in may not show its weakness until you try to finish it, and then it will seem to "fall apart," develop a "spotty" look, or otherwise exhibit the symptoms of lack of unity. No additional heaping up of surface detail can hide the defects in such a drawing. You must get back to the original structure and correct the faults there.

Do not be afraid of "spoiling" a drawing by returning to the fundamentals of structure immediately, if some weakness is exposed as you work on finish and detail. The drawing will be bad, no matter how neat and skillful the finish you put on it, so long as a weakness exists in its fundamental planning.

It is possible to develop details in this same diagrammatic manner, keeping all the smaller parts of a composition in a proper rhythmic relation to the planes of reference, the three or more planes of depth. The limbs of a tree, the shape of a cloud, the contours of a hill, may all be blocked out in as much detail as is desired, and may be provided with textural effects on their surfaces: patterns of leaves, grass, straw, and so forth. The drawing may remain entirely in line, but you will probably find that an increasing number of lines may obscure the main construction lines of the picture. It will not be possible to texture every surface intricately, or the whole drawing will become grey with fine line detail, and the simplicity and unity of the first planning may be lost.

The artist must realize that in drawing texture-lines he is also darkening areas. Textured surfaces should be contrasted with non-textured or slightly textured areas in such a drawing, in the same way that it is necessary to contrast or relate the various planes of a value drawing. Texture functions not only as variation in surface roughness, but also as part of the dark-light pattern.

Surfaces which are relatively smooth may be left untextured for the sake of contrast, and those which are roughly textured need not be entirely covered with the texture pattern if it obscures essential construction lines.

You may have to try the following exercises a number of times before you succeed in getting the blocking-in to work together properly with values and textures. Send in only the two best of your compositions.

Exercise (a)

(1) Draw a new landscape composition in outline, in closed space, emphasizing vertical and horizontal relations as in (1) of the previous assignment. Compose the subject chiefly in left hand space below eye level. Texture some of the rougher surfaces judiciously with flat pattern textures. (See drawing of walnut, etc., in Part I, Assignment 10.)

(2) Execute the same drawing with textures which follow the roundness of the forms. (See corresponding drawing of walnut.)

Part II · Assignment 8

Landscape Drawing and Composition (cont.)

Space-Pattern Balance

Naturalistic effects of light and shade have so far been neglected in our landscape work. Let us consider what their proper place may be in a balanced composition.

Exercise (a)

(1) Make a quick study in monochrome watercolor of the light and shade effect of a given landscape at a given time. Let the subject be in central space.

(2) Make a carefully studied blocked-in outline drawing of the same subject, in closed space, with more indication of depth. Apply the naturalistic light and shade arrangement, in monochrome watercolor, to this drawing (see Part I, Assignment 8), as well as incidental modeling of surfaces (see Part I, Assignment 10), modifying them in the interests of rhythm, unity, and balance. Do not hesitate to change natural light and shade whenever they destroy the outlines of forms necessary for your main construction.

Apply to this drawing a pencil texture which follows the contours of the forms.

This method will produce a deceptively naturalistic style of drawing which is as near to the appearance of nature as it is probably safe to go without producing undesirable effects of illusion. Remember that the blocking-in must establish a closed-space balance between pattern and depth, and that nothing must be allowed to obscure or destroy this initial construction. The naturalistic effects of texture and light and shade must occur in and around this semi-abstract basic structure.

Such a drawing will probably hang well on a wall, although it may be too strong in its space effect. This will depend upon your success in constructing the space-pattern balance in your initial blocking-in.

Exercise (b)

Execute another closed space landscape drawing in outline, into which you construct considerable space effect. Place this one in right hand space above and below eye level. Apply monochrome wash to present the light and shadow as it occurs in the landscape.

Texture suitable areas with pencil in a flat pattern manner.

In this case the values are to be used to increase space effect, and textures are to be used to minimize it, thus effecting a balance which may be destroyed by too great an insistence on either.

Exercise (c)

Execute another closed space landscape drawing in outline, with considerable space effect and considerable detail of blocking-in. Place it in left hand space. Ignore natural light and shade entirely, and apply in monochrome watercolor an interesting and rhythmic dark-light pattern, chosen for its decorative effect and because of its power to simplify, unify, and tie together the multiplicity of drawn forms.

The areas of dark and light in themselves should produce planes which, in the main, have vertical and horizontal axes. The planes may flow over those forms in the outline drawing which have diagonal space movements, but will themselves increase pattern effect. Contrast this with the last drawing, where values were used to emphasize the effect of the planes moving away from the picture plane into space.

Add pencil textures which follow the modeling of the forms.

Exercise (d)

*Greatest Value
Contrast in Far
Distance
to balance deep
Space of drawing
(Compare: da
Vinci's "Last
Supper")*

Execute your final landscape composition as above, placing it in right hand space; construct deep space as before, but use both texture and light and shade to balance this depth with flat pattern.

These exercises should awaken in you an understanding of many of the styles of drawing and painting which have been used by artists of all ages. Some painters combine these devices for effecting depth or pattern in one way, others in another. Some adhere quite strictly to certain aspects of natural appearance, and others do not, depending upon their purposes.

Drawings may be either flat or deep in outline construction. They may be flattened by the use of value contrasts in the distant parts, or deepened by contrasted values in the near parts. They may be similarly flattened or deepened by the use of coarse or fine textures, as well as by darkness or lightness of the textural pattern.

The spatial elements of the forms--diagonal, twisting and turning planes; elements which are not parallel with the picture plane--may be picked out and emphasized by the use of dark and light, or they may be minimized by the same means in order to indicate flatness. A dark and light pattern which is flat in itself may be superimposed on forms which are drawn in depth.

In the drawing which holds up under all conditions and circumstances of use, a balance of some kind between space and pattern is always created through the coordinated effect of these many elements.

Part II · Assignment 9

Figure Drawing

Introduction

The "life class" method has been accepted by traditionalists and conservative art pedagogues for generations, as the one and only way of teaching practical drawing. It is assumed that with life class training one is capable of drawing anything.

Varying with different instructors, this practice is at worst a deadly routine. The student learns to trace slavishly the outlines of a nude or semi-nude human figure, making no other attempt at space-planning or design than to "fill" properly the full sheet of charcoal paper on the easel before him, with lines and shapes which accident happens to bring to the eye. This may go on through years of study, during which the student develops a sort of niggling handcraft in the use of charcoal, along with the ability to reproduce accidental outlines and shadows exactly as they appear. In some schools he may go through a preliminary course, equally deadly in its monotony, of "antique" drawing, using second or third rate casts from fragments of Roman and Greek sculpture. The instructor arranges the lighting so that shadows fall in positions more or less useful for displaying the modeling and contours of the forms; the student copies these forms, lavishing as much as ten or twelve hours upon the refinement of charcoal surfaces in a single drawing.

This method carries with it a certain amount of mumbo-jumbo in the way of "measuring," use of plumb-lines, and so on. It may include some anatomical explanations. But the less enterprising of the students will be satisfied to sit in the life class evening after evening, dully copying the forms set before them; and years later they may be doing the same thing still, having progressed only to greater detail.

Such students are under the impression that they are studying art; and the human product of this sort of training is known humorously among more broadly trained students of art, as a "life class artist." After years of effort he is capable of only one thing: to sit in front of a form which is favorably lighted and perched before him on a podium, and copy it. He could, of course, do as much in a shorter time with an inexpensive camera.

Unless the study involved in life class drawing leads to something else, it is useless.

The life class comes to us out of that time in the Italian Renaissance period when new discoveries were being made about the structure of the human body. It was thought that figure painting was the noblest adventure in which the artist could engage. Anatomy was a fresh, new science, as stimulating to the active imaginations and intellects of that time as are today the subjects of psychiatry, relativity, and the discovery of the world within the atom.

Until a short time before, religion and law had forbade investigations into the structures beneath human skin. In their desire to excel the Greeks in use of the human body as a symbolic figure, the Italians studied Greek and Roman fragments on one hand, and the actual human body on the other. What is now quite commonplace knowledge, found in any anatomy or physiology book, then was to be discovered only through actual dissection and arduous research.

These conditions, however, do not obtain in the life class of today. It is now no more than an empty ceremonial copied from the pseudo-classic practices of the official French academies, which themselves were copied, without understanding, from the methods of the workshop schools of fifteenth and sixteenth century Italy.

Space has here been given to a discussion of the life class method for the reason that the beginning student may very well find such a class in operation in his own community. Unless he is warned, he is likely to find himself pushed unwittingly into the stultifying practices of the wrong kind of figure study. He may be unduly impressed by the atmosphere of tradition which surrounds even the most meaningless practices of the "life class."

The proper aim of drawing the human figure is to learn how to use the human figure in composition: that is, in combination with other forms. This was the original aim of "life class" drawing. Progressive teachers of figure drawing encourage the study of the figure in relation to other forms from the very beginning. They encourage also memory drawing of the figure, and study of the shapes and possible movements of individual parts of the figure.

This aim involves some study of anatomy. Typical proportions of man, woman, and child are contrasted. The muscles involved in expression and gesture are investigated. Casts from statuary and from the human figure, as well as draped and undraped living models, are used for such study.

The distinguishing characteristic of the modern attitude toward figure drawing lies in the fact that the figure is studied with a view to its use in composition. It is fitted into a work just as any other form is fitted in; it is interpreted rather than copied. Analytic anatomical study finds its balance in synthesis: in the construction of the figure or figures as part of a whole composition, from a subject either in or out of doors.

How may the student working at home best pursue the study of figure drawing?

First of all he must acquaint himself with the general physical characteristics of all human figures, those things which they all have in common. He may do this by a study of his own body, as it appears to him in a mirror. When he wishes to know the real shape of a shoulder, for instance, he may feel its contours with his hand. The artist's first and best model is himself.

Next, after the student is able to block out the figure in various positions with some degree of proficiency, he should begin a more detailed study of particular parts of the body. The foot should be studied in several positions; the knee joint, the shape and movements of the hip, the trunk and the abdomen, twisted, bent, or straight, the hand, elbow, arm, and shoulder should be studied, as well as the joining of the neck with the shoulders.

Almost every student of drawing starts out with a burning desire to "do heads." The head as such is not such a difficult form (not so intricate and complex as the hand), but variations in facial character and expression are of sufficient difficulty to warrant special study. Facial expression and portraiture should probably be left to the last, since they require the most delicate treatment in order to produce satisfactory results. The trouble is not that these forms are more difficult in themselves, but that all of us are so familiar with faces that we are very critical of drawings of them. We look at faces continually, and we are quite skilled at noticing their slight variations. We recognize people most often by their faces, although we are aided by tricks of gesture or movement.

While this study of detailed figure construction is going on, it should be paralleled by the introduction of blocked-in human figures into landscape and interior compositions. The figures should first be drawn from memory as blocked-in forms, then corrected by observation of a figure in the desired position. As the study of detailed structure goes on, more and more details, so far as they are significant to the action of the figure in a given composition, should be introduced.

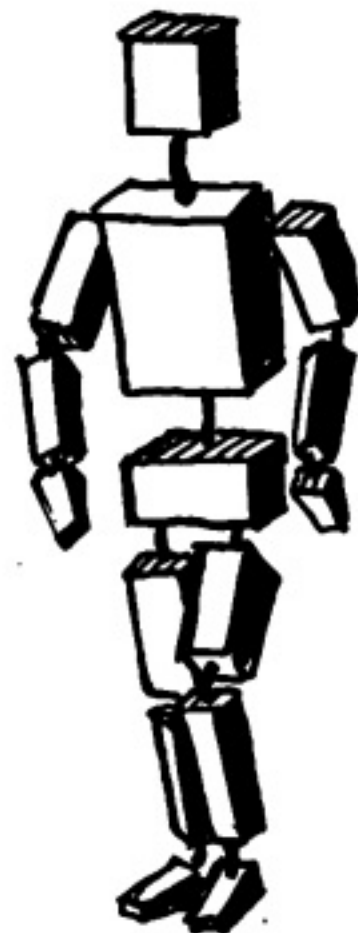
Remember that a figure drawing may be as easily overloaded with meaningless details as any other sort of drawing. As your knowledge of structure and anatomy grows, learn to suggest rather than draw completely the anatomical details. Only a few of them will be useful for carrying out your meaning at any one time. It is a common fault, in student figure drawing, to overload a figure with anatomical detail which has no function, expressive or rhythmic, in the composition at hand.

Can the "life class" play any part in the study which we have outlined?

If there is such a class within your reach, use it to round out your study of body structures. However, you will be able to do almost as much at home and with your own mirror, perhaps with the cooperation of a friend or fellow-student. Keep your sketch book with you at athletic events, on the bathing beach, in any place where lightly clad figures are to be seen in action.

Remember that, although study of the nude figure is useful for practice in drawing structure, you will seldom find reason to draw or paint completely nude figures under the conditions of contemporary life. Study of the nude figure was of first importance to the Greeks and to the Italians, whose figure painting depended upon the use of idealized figure-symbols for spiritual and natural forces. It is probably of only instrumental importance to us; that is, it is useful only in so far as it aids us in the construction of clothed figures in compositions which include other interior or out-of-door forms.

Average
Male Figure
Proportion in
terms of head



Directions

For the work in this assignment, gather a number of magazines or papers containing photographs of figures seen in action, or in various positions. You will draw directly upon some of these pictured figures with a red pencil.

Before making the analyses, however, we must investigate the general structure and possible movements of the human figure.

The body is made up of a combination of parts which are relatively stable in shape, and parts which change their shapes in the course of body movement. Our first task is to differentiate the more or less fixed shapes from the flexible parts of the body. For the present, we shall represent these fixed parts as angular block forms, emphasizing in this way the front, side, top, or bottom planes of the parts, and the direction of their axes. (Review Part I, Assignments 2, 3, 6, etc., on parallel, tipped, and turned blocks, and the axes of planes and forms.)

For us at present the head will be considered a block out of which we may later carve a more detailed form. We represent the flexible parts merely with lines in this diagram.

Consider next the neck. We find it to be a cylinder in general shape, but one so flexible and changeable that we represent it in our diagram of solid and flexible forms only as a joining cord.

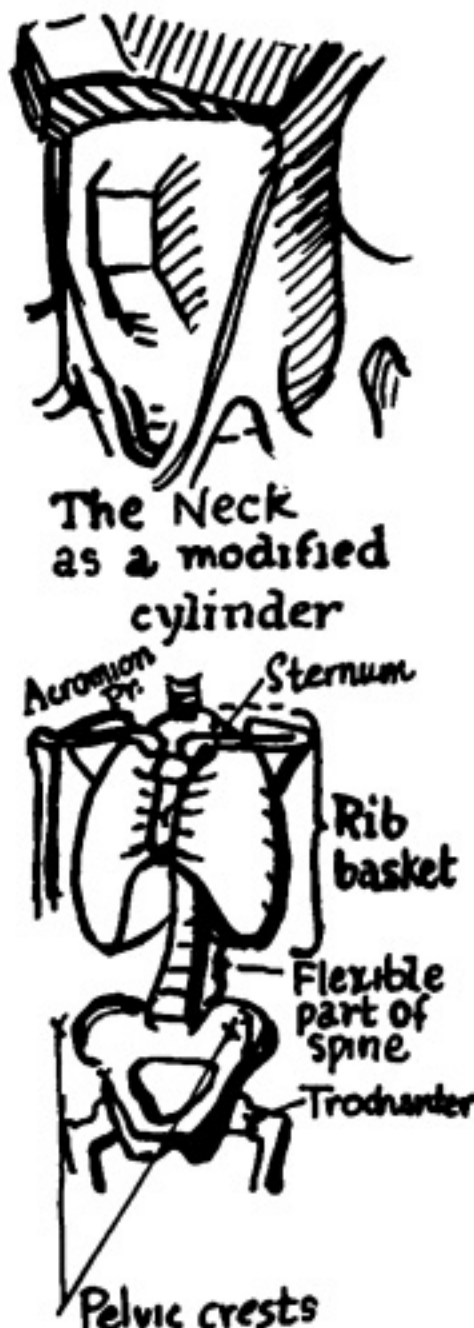
The shoulders are independent of the torso, it is true, and may move up and down, forward and back, independently of the chest. But for the present we shall consider them as minor forms, incorporating them into the block which represents the upper part of the forearm.

The upper torso forms a block which ends somewhere near the lowest point of the ribs. By placing your hand upon the lower edge of the "rib basket" (as it is referred to in art anatomy books) and bending forward, you will find that the lower part of the abdomen must be considered as a flexible part, in relation to which the rib basket is a comparatively fixed form.

Place your hand on the "small of the back," and you will discover that most of the bend in the spine occurs in its lower middle section. This part of the spine will be represented in our figure diagram as a flexible cord. We shall not draw in the abdomen at present.

The next fixed form is the hip mass. Placing the hands on the hips, a firm ridge will be found at each side, supporting the soft parts of the abdomen. Actually this bony ridge is the edge of a bowl-like structure which supports the soft contents of the abdomen and is known as the pelvis. For the purposes of our preliminary diagram, we generalize this entire structure into a block which is about as deep as it is high, and somewhat wider than it is high.

Below this block are the flattened cylinders of the thighs, which we fasten to the block of the pelvic mass by short lines to indicate the flexibility of the hip joints. We represent them by oblong three-dimensional shapes of the proper proportions.





The knee is another flexible point, the lower leg a fixed shape.

We consider the foot a fixed shape, and the ankle a flexible one.

Going back to the upper part of the torso, we treat the arms as we did the legs, in proper size proportion.

Exercise (a)

Construct a block figure with flexible parts indicated by single lines, by studying the proportions of your own body.

Begin by drawing a line on the paper to stand for your height. Then decide how much of that height should be used up by the block form of your head, how much for the neck, upper torso, lower torso, and so on. How far down do elbows, wrists, and hands come on this line?

You will find several points of reference on your body useful in establishing its proportions. First, the pit of the neck marks the top of your torso block, and the lower edge of the ribs at sides marks the bottom. The pelvic block begins with the crest of the ilium, which is the ridge of the hip bone previously referred to; its lower part will be in the region of another important reference point, the end of the great trochanter, which is the upper end of the large leg bone where it enters the hip. You may find it by investigating the side of the hip about a hand's length below the crest of the hip bone.

The upper leg ends above the knee, and the lower leg at the ankle bones. A useful point for the beginning of the arm structure is the acromion process, which is a point found at the outer and upper part of the juncture of shoulder and arm.

Another useful point to locate in this diagram is the bottom of the sternum, or chest bone. It is found in the inverted V formed by the meeting of the ascending curves of the lower ribs, between abdomen and chest.

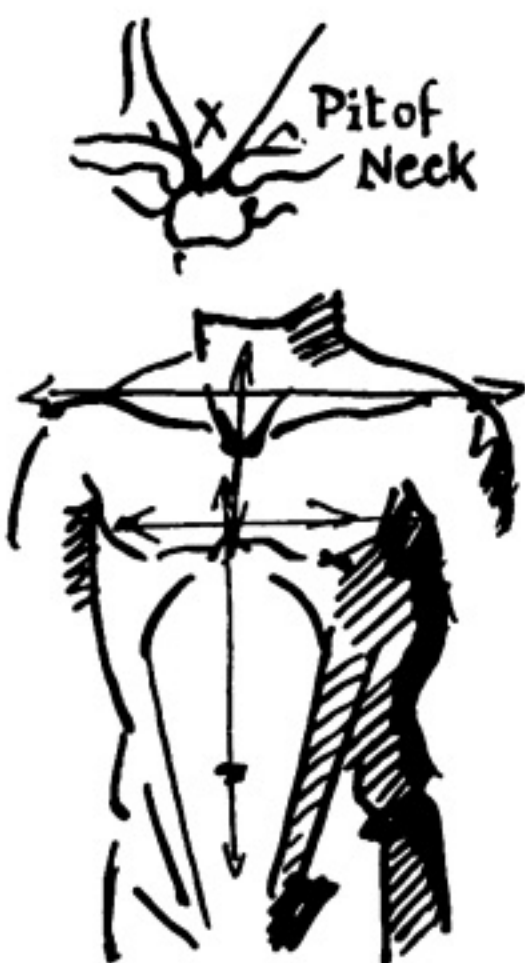
The chief use of these anatomically named points, at first, is to aid us with the problem of getting the major axes of the fixed parts of the figure properly planned.

Exercise (b)

After you have investigated and blocked in the parts of your own figure as above described, try fitting the diagram onto your collection of photographs and illustrations of human figures in movement.

Draw directly on the pictures with a red pencil. You will find the axes of the face by drawing one line horizontally through the eyes, and another vertically through the base of the nose. (Do not follow the tilt of the nose.) The base, or front, of the ears will give you another vertical. With these axes construct the head block in the position in which it appears in your photograph.

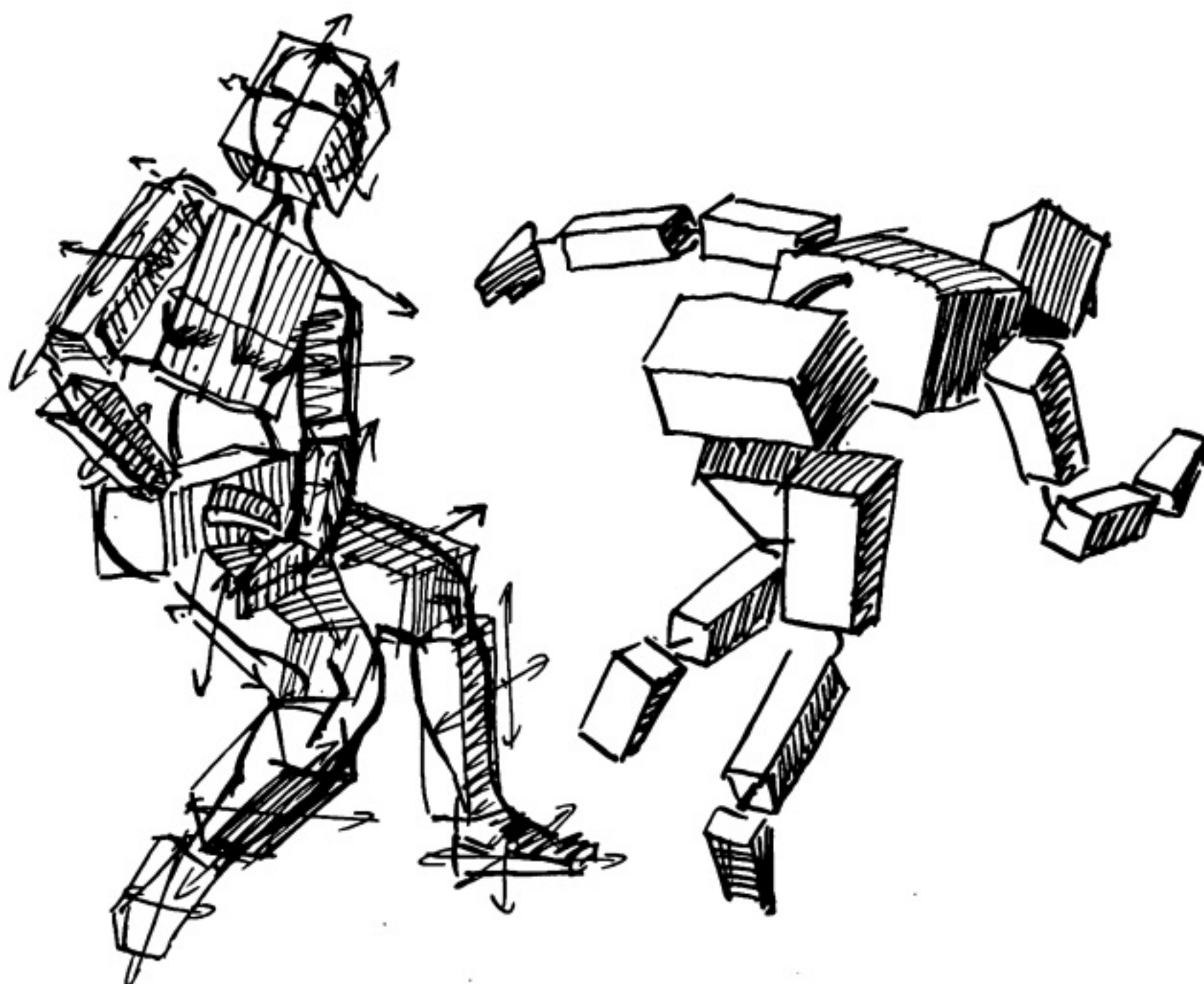
Locate the approximate position of the acromion processes, the pit of the neck and the base of the sternum. These will give you vertical and horizontal axes for the block of the chest. Lines across the crests of the hip bones, and from the ends of the trochanters, will give you one axis of the pelvic mass.



Continue as described, blocking out at least six such figures, choosing those in which the fixed parts are twisted and tipped as much as possible. Some of the photographs will not furnish you with very clear points of reference. Choose those which do, at first.

Send in the six best of these blocked-in figures, along with the blocked-in diagram of your own figure.

Continue the practice of blocking-in the human figure by this diagrammatic method, in all possible positions, using as references your own body, reproductions, photographs, and sketches of other people.



Part II • Assignment 10

Figure Drawing (cont.)

As in the study of landscape drawing, continual emphasis on blocking-in is more important to the student of figure drawing than any attempts at superficial "finishing." The study should proceed from the blocking out of the entire figure, to more detailed blocking out of the planes of the various parts of the figure, and finally to the summing up of the planes and their movements in a plastic silhouette. (Review Part I, Assignment 10, concerning silhouette and outline drawing.)

Within the time and space allotted to this course, only an introduction to figure drawing is possible. A student who wishes to proceed further by himself may shorten his labors by providing himself with any one of a number of excellent books on figure drawing and art anatomy. He should choose that one which contains the most helpful diagrams, rather than the one with the cleverest drawings.

A good choice would be Anatomy and Drawing, by Perard; another, Practical Art Anatomy, by Lutz; another, The Human Figure, by Vanderpoel. One of the best is an older book printed in England, called Figure Drawing, by R. G. Hatton, but it may not be easy to find.

There are, however, good figure draftsmen who have learned all they know by continual intelligent practice along such lines as those indicated here.

Exercise (a)

Draw a detailed blocking-in of an arm and another of a leg, in pencil. Then draw into these diagrams, with red pencil, the plastic silhouettes which interpret the movements of the planes.

Exercise (b)

Make a drawing of your own left hand (or if you are lefthanded, draw your right hand). Be sure it is lighted so that the shadows are of some help to you in interpreting the forms.

Using pencil, block it in first in detail, and then with monochrome watercolor apply a dark-light scheme suited to the emphasis of the main changes in direction of the planes of the forms. Remember that some shadows should be sharp edged, others soft edged, depending upon the slow or fast curves of the contours. If all shadows are sharp edged, the hand will be bony looking. If all shadows are soft, it will look like an inflated rubber glove. A well-cared-for feminine hand or the hand of a child is apt to have soft edges in the shadows. A much-used, strong hand is apt to be more angular.

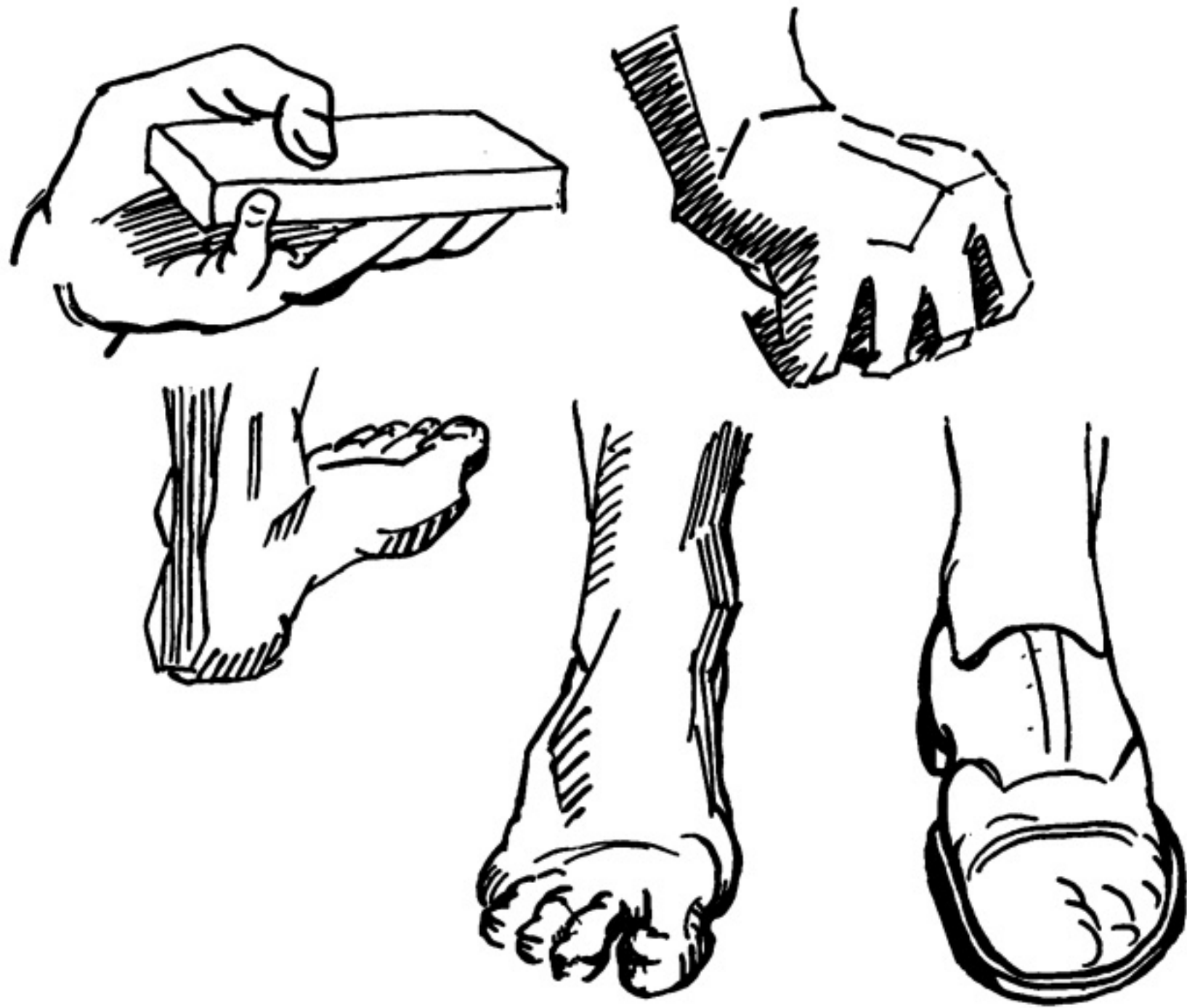
Exercise (c)

Block in the shape of your foot and toes. With red pencil, draw the outlines of a shoe around it, showing where the wrinkles in the leather must come when the foot bends.

Exercise (d)

Send in at least four quick pencil sketches of figures blocked out in action, to which you have added the emphasizing effect of monochrome watercolor. Let two of these be executed in a value scheme of dark and

light against grey, one in light against dark, and the last in dark against light. (Review Part I, Assignment 8, on the egg in various positions of illumination.)



Part II · Assignment 11

Cartooning and Caricature

Introduction

Many beginning art students are attracted by the possibilities of humor in drawing. A great deal of popular humorous illustration is of good quality, and there appears to be a wide market for such work.

The apparent ease and casualness of the cartoonist's technic is apt to delude the student. Facility in this sort of work takes technical knowledge and long practice, as well as a talent for whimsical exaggeration. It is an axiom in the cartoonist's trade that either the drawing must be good or the joke it illustrates must be good. Many clever draftsmen cooperate with jokesmiths and "idea men" who do not draw, but who produce ideas which are drawable. Only a few cartoons are entirely the products of single minds.

Some "free lance" artists study the styles in humorous drawing which are used by a given publication, and submit suitable sketches direct to the publishers. Most presentation and selling, however, is done through agents who specialize in representing artists.

The technic in which most of such work is executed is black India ink line applied with pen or brush, although, for publications which use half-tone reproduction methods, black and white blended wash combined with pen and ink line is acceptable.

Drawings are executed in the correct proportions to fit into the column width used by the publication, but are made from one and a half to three times larger, thus allowing the artist more freedom in his work. When a drawing is received, it is reduced to proper size by photographic means. This minimizes any roughness of the artist's lines, and makes the drawing appear more finished.

Such drawings are done ordinarily on some variety of illustration board, a stiff cardboard with special pen and ink or watercolor paper ready-mounted on it. For protection, a drawing is usually "flapped" when finished, with a tissue or wrapping paper cover, pasted along the back of one edge of the drawing and folded over the face of it. On the back of the drawing the artist writes, "Submitted at the usual rates," and includes return postage and his address in the package.

A drawing may be submitted to several likely publications before it finds use. Many, of course, are never used, since the supply of good work is usually far in excess of the demand, and there is plenty of competition. The fact remains, however, that some artists have succeeded in establishing themselves in this unpredictable business by beginning as "free lancers."

Cartooning

Most of the creators of American cartoons, cartoon "strips," and "funny paper comics" have developed out of experience in newspaper art departments, for the good reason that here the limits of inexpensive reproduction and the tastes of the general public may best be learned. The newspaper artist may be employed for part of his time in mounting and retouching photographs, lettering captions, and working at the careful, mechanical sort of draftsmanship which is part of the whole business of engraving and printing.

Engraving houses are firms whose business it is to transfer drawings and paintings onto metal plates, which may be printed along with type. A newspaper art office is first of all an engraving house art department. Its artists are sufficiently well acquainted with printing and engraving methods to draw for the needs of the engraving process.

Beyond the mechanical work in a newspaper art department are illustrations for feature stories, sports cartoons, and perhaps a daily political cartoon, which is usually drawn by an experienced artist in consultation with the political editor.

To Enlarge in proportion:



Lengthen one side to enlarged length desired.

Then draw horizontal to meet diagonal of format.

After the newspaper artist has worked his way to this level, he may find a feature syndicate interested in his work. He may have developed a style of drawing, or a character which appears repeatedly in his drawings, which has some special appeal for the newspaper public.

A feature syndicate is an organization which distributes the work of newspaper artists to newspapers in a number of towns. This is accomplished by sending out papier-mache moulds of the first engraved metal plates made from the original drawings of an artist. The moulds are known as mats, and they are substantial enough so that type metal may be cast in them to make duplicate printing plates, by the newspapers which subscribe to the syndicate service.

Work for syndication must be done some time in advance, to allow time for reproduction and distribution of the mats. Most comic strips are completed in blocks of installments, weeks or months in advance of their appearance.

The artist who is determined to work in this field should begin early to learn all he can about newspaper methods, and processes of reproduction and printing. In addition, he must learn to draw fluently, easily, and accurately with pen and ink. He will gain little by copying the cartoon figures of other artists, but should originate his own drawings and cartoon characters.

The word cartoon applied originally to a finished preliminary drawing for a painting. It was executed, probably in charcoal, the full size of the painting, its main lines perforated, and a bag of charcoal dust used to pounce these guide lines upon the wall or panel. The cartoon consisted of the chief structural lines of the painting only.

This kind of condensed and abbreviated drawing lent itself well to the limited possibilities of early methods of reproduction. Wood engravers and etchers, the first reproduction artists, used this style of drawing to copy the lines of a painting; but it was not possible at first to reproduce all of the tones. The style of the great caricatures of Daumier was made possible by the development of lithography.

Although the mechanical processes of photo-engraving and photo-lithography now make it possible to produce results much closer to the original painting of the artist, it still is much less expensive to reproduce in the line-drawn cartoon style, and to print into the cartoon flat areas of color, which have been mechanically stippled and patterned upon the metal plate by a kind of stencil process known as the Ben Day process. Most comic supplements in color are done by this method.

The first step in preparing a drawing for such uses is the pencil "rough." A "rough," or rough sketch, in its first stage is a spontaneous and direct setting down of the main lines of an idea. The "roughs" created by some skillful artists are sufficiently near the complete idea to be worked on directly, and made into "finishes." With others the drawing may go through a number of stages, called respectively "rough," "finished rough," and so forth.

The artist often perfects his drawing by the use of tracing paper. When the "rough" has been carried to the point where more erasures will destroy its paper, a sheet of tracing paper is tacked over it, and those lines which are nearest to the idea of the finished drawing are traced. After all difficulties have been ironed out, the final tracing is transferred to a sheet of illustration board, and the drawing is rendered in pen and ink line with little or no shading. Or it may be transferred to a rough-surfaced illustration board and executed in black wax crayon or in "dry brush."

Both of these latter methods utilize the rough surface of the paper in such a way that tones in a drawing appear as aggregations of small black dots. The crayon is used delicately, leaving plenty of white paper between the dots, since otherwise the drawing will reproduce badly. If the dots are not clear cut, the spaces between them will "fill" with ink during printing, and an area intended for a tone will come out as a solid black spot. "Dry brush" is particularly tricky in this respect. It is applied after allowing India ink or black opaque water color to thicken somewhat in the brush, so that when the brush is dragged over the rough surface of the paper, it catches only on the raised parts of the surface, producing a tone instead of solid black.

These methods are described to give the student some idea of the technical mastery re-

quired for success in this type of work. Cartooning looks easy because the artists who create cartoons are specialists, who go to a great deal of trouble to produce the appearance of spontaneous ease in their finished drawings. That is part of the charm and value of their work. The person who enjoys the cartoon seldom thinks of the painstaking work which has gone into the "roughs." Regardless of misleading information promulgated by mail-order schools of cartooning, one cannot become a good cartoonist without learning to draw.

Of course a very experienced artist may "knock off" a sketch with spontaneous ease, but even he will not be able to do it every time. The common practice is that of developing an idea in pencil through a series of "roughs," working constantly to eliminate unnecessary lines, and to make the lines which remain tell more.

A good line drawing does not so much leave out, as it condenses. A single line must carry more meaning, must be more significant, when it is required to carry the whole burden of conveying the idea of the form, without the aid of value, color, or texture.



Square



Triangles



Combinations



Humorous Drawing; Caricature

Humorous drawing achieves its effects not only by a bold and simplified technical treatment, but by conscious emphasis upon certain aspects of the forms drawn. Caricature selects the aspects of a human face and figure which are personal and individual, and exaggerates them at the expense of all other features. The creator of an idealized human figure, such as in Greek statuary, subdues any abnormal or uncommon shape in an attempt to express a perfect balance of all human physical qualities; but the caricaturist works from the opposite point of view. The very things which are subdued in the idealized figure are exaggerated by the humorous artist to the point of ridicule.

A caricature of a face may be done with the greatest good humor in the world, or it may be done maliciously. If a publication is interested in detracting from the reputation of a public figure, it may call upon its illustrators to help. Compare the cartoons of leading figures in any bitter political campaign, appearing in the papers supporting them, with those in the papers which are on the opposing side. Watch the treatment of some significant feature, such as a nose or chin.

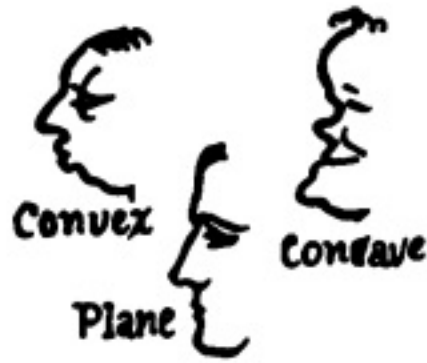
The successful caricaturist is a physiognomist of a sort. He consciously or unconsciously hits upon features which stand for certain qualities of character in the mind of the public, and according to his wish minimizes or exaggerates those characteristics in the person he is drawing.

It is of use to the student to be familiar with types of face and body structure as classified by physiognomists, not because there is much scientific basis for the idea of a relation between facial structure and the character of the man behind the face, but because most people believe in it.

Faces may be classified in terms of combinations of simple geometrical forms. See the accompanying drawings.

There are many books on physiognomy to which one may refer, but it will suffice here to illustrate the possible use of one facial symbol for character:

It is a common superstition that a "firm" chin denotes a "firm" character, a receding chin a "weak" character, and a huge protruding chin a sort of stubborn, rock-like power.

Exercise (a)

(1) Draw a face taken from a photograph of a public figure, in pencil line, adhering closely to the normal balance of the features as they appear in this and in other photographs of the same man. Keep your drawing in line technic; do not shade.

(2) Draw the same face again in line. This time exaggerate the chin greatly, keeping the other features as they were except where it is necessary to alter them to fit the new chin.

(3) Draw the same face again, minimizing the chin a great deal, but keeping other features as much like the first drawing as you can, except where it is necessary to alter them to fit the new chin.

(4), (5), (6) Do a similar set of three drawings of your own face as seen in the mirror.

Part II · Assignment 12

Portrait Drawing

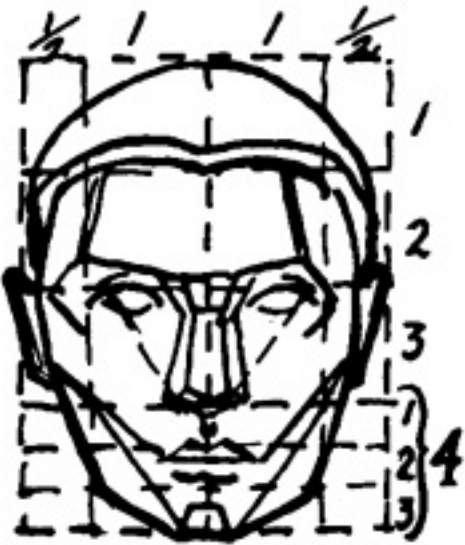
Reproduction of surface "likeness" is not the chief aim of the contemporary portrait draftsman and painter. The painstaking representation of every detail of a face does not produce a portrait. It is true that the portraitist must have at his command a technic which allows him to deal in subtleties of form; but it is also true that this technic is wasted if it is employed only in mechanical copying. Such work may be done more cheaply and quickly by a photographer.

All great portraits, past or present, have been interpretative. They have employed the devices of draftsmanship and pictorial composition for the presentation of human character.

The honesty of the interpretations has depended entirely upon the position of the artist in the social scheme of his time. If he was honored and trusted as a great man, he was free to paint people candidly; often he painted great portraits of unimportant people. If he was servile to a degree, he painted his subjects more or less as they wished to appear.



The Pompous Portrait



3 Noses or
5 Eyes wide
4 Noses high
One way of block-
ing the average
head. But most
characterful faces
will vary from this
average.



At its worst, the portrait depicts a sitter in accordance with the popular conventions of beauty prevalent at the time. The society portrait painter often is little more than a make-up artist who does what he can to flatter his clients in return for a fee. He makes his ladies as beautiful as possible, his men as impressive; he stretches "likeness" as far as it will go. These things he is able to do by tricks of composition and color relationship.

Let us say, for instance, that a man whose portrait is to be painted is a rather insignificant individual who would like to appear masterful. The portraitist, having discovered this desire, decides which features may be reproduced with fidelity, and which must be emphasized, in order to overcome the apparent weakness of his client's face.

Perhaps this man has a small chin, of the kind called "weak," and is small in stature. The portraitist may paint him from slightly below, to look as if he were regarding the world from an eminence. The chin may be enlarged a little, or made more important by means of a color scheme chosen so that this feature may be seen in full light, leaving others in comparative darkness. Alternatively, the chin may be hidden, and stronger features emphasized instead.

When the picture is done, his friends recognize the man because the "likeness" is there; but being laymen they are seldom able to determine what it is that causes him to appear so impressive. They do not understand that the relation of details is more important in depiction of character than are the details themselves: that if the shape of a skull is altered, the character is apparently changed, even though such details as the wrinkles around the eyes and the shape of the lips are faithful reproductions of the sitter's appearance.

The portraitist has suggested, speciously, that the man is taller than he is, by a trick of composition. He has painted the face as seen above the eye level of a person of ordinary height.

The honestly interpretative portrait employs identical devices in emphasizing characteristics which the portraitist feels are really important facets of the character of the person before him. Such a portrait is truer in the psychological sense than any mechanical reproduction of surface appearance, however skillful, can ever be.

It must be emphasized that the skill necessary to produce either a falsely "glamourized" portrait or a true interpretation of character is not gained without long and constant study.



Eye



Nose



Lips

To begin with, facility in drawing must be developed until the artist need no longer worry about what his hand is doing. He must have complete fluency. His mind must be on the problem of interpreting his subject, while he works upon a portrait; he should not have to worry about the accuracy of a curve or the straightness of a straight line. These things he must be able to produce at will without consciously thinking about them, if his faculties are to be free for work upon the larger problem.

The expression of a face changes continually. Drawing must be quick and sure to set down the desired expression while it is there, for it may be gone in a moment, and may return only occasionally. When it does reappear, the portraitist must be instantly ready to take up further development of the parts of the picture affected.

The beginner will want his model to be immobile. He will think that if he could only get the sitter to freeze into complete motionlessness for an hour or so, he could achieve a good portrait.

Nothing is further from the truth. Sitters differ in the degree of mobility of their features, but none will look like himself as his friends know him if he is required to sit as an immobile lump of flesh for more than a few minutes. Character and likeness do not lie in any one position or relation of features. It is the sum of the characteristic expressions which must be set down by the artist, not the dead copy of any one of them.

For these reasons the portraitist often develops a technic of conversation designed to interest his sitter, to make him forget that he is posing. He may play little tricks on the sitter to get the expression he desires. He may concentrate the sitter's attention on one feature in order to get him to relax another; he may remark that he is working on an eye when actually he is studying the mouth.

A sitting might go something like this:

When the subject arrives, to keep a definite appointment previously made, the artist has all materials ready, including the seat (if used) and the background against which the sitter is to be placed. Preliminary observation has decided whether the picture is to be head only, head and shoulders or "bust," three-quarters figure or full figure.

A successful portrait seldom cuts off a figure at any of the joints of the body. When a picture frame cuts across a figure at the knees, for instance, an observer sometimes receives the unfortunate impression that the lower legs are not really there. It is important to convey the effect that all of the figure exists even though it is not depicted. This may be done by control of compositional movement. It is more difficult to accomplish if an arm or a leg stops at an obvious amputation point.

Having posed the sitter according to a preliminary plan, the artist must now decide whether his earlier ideas of lighting and pose are likely to work out successfully. If he is unsure, he may find it necessary to do several charcoal studies before he knows just what he wants. Each drawing will add to his information concerning the anatomy, characteristic gestures, and facial expressions of the sitter.

Sittings vary in length according to the patience of the sitter. The artist usually finds that several short sittings are better than a few long ones. Posing is not easy work, and inexperienced models become cramped and tired. Their feelings often creep into the expressions of their faces in spite of effort.



The moments most valuable for the artist are those during which the sitter is holding the desired pose, but is interested in something else.

The work will progress in fits and starts. When the model first takes the pose he may be too rigid. The artist is careful not to call attention to the rigidity, but starts to work, perhaps on relatively unimportant parts of the figure. Gradually the pose loosens, and the artist grasps the moment to indicate the desired expression.

Even an experienced model should seldom be asked to hold a position longer than a half hour at a time. Every twenty or thirty minutes the model should be encouraged to break the pose entirely and to move about, relaxing the muscles which have become stiff through posing by exercising other muscles. This five or ten minute rest may often be used by the artist to gain valuable information about his client, his interests and attitudes of mind.

The artist himself must decide whether his sitter is to be allowed to see the painting or drawing in its early stages.

The portraitist of today often varies widely from optical appearances, in order to bring out characteristics he feels necessary to an honest interpretation of his sitter, and to develop rhythms between the parts of his picture which will heighten the total effect. He uses the same devices which the caricaturist uses, though much more subtly, and with serious rather than humorous intent.

Portrait painting which does not avail itself of these freedoms cannot compete in effectiveness with modern photographic portraiture. It is only through proper utilization of the draftsman's freedom to interpret that the portraitist is able to make his art worth while today.

Exercise (a)

Enlist the services of a friend as sitter, and make an appointment for a sitting. Choose the pose according to your idea of how best to display the essential characteristics of your sitter, and according to a preliminary pencil sketch.

Execute two or three preliminary studies in charcoal.

Execute the finished portrait in black crayon. Send in your preliminary pencil sketch and the finished crayon portrait.

Part II · Assignment 13

Illustration and Advertising Art

An illustrator is an artist who puts his knowledge and skill at the disposal of an author or writer. The very essence of illustration is that it is not something of itself, but that it explains by means of figures or examples. Drawn and painted illustrations are properly subordinated to the needs of a written exposition, argument, or narrative. A few authors have been their own illustrators, but only a few.

It is a truism that "an illustration should illustrate." It should be more than just a pleasant or clever drawing included with a printed manuscript. The planning of an illustration of any kind takes understanding of the work of a writer, and an imagination trained to translate the meaning of the work into pictures which amplify its effect.

Illustration as a business and art is divided into many specialties, demanding very different types of art work. Most people think of it in terms of popular magazine illustration. Here the style of work is that of the current vogue in popular romantic art. Usually the technic is a simplified version of a style worked out years before by some experimental-minded "fine" artist.

One may say that all popular art of today is a cleverly simplified reflection of the successful fine art of yesterday. Styles and mannerisms wear out in their appeal to the public. New ones are usually first developed by the independent, non-commercial painter. The business men in art activities have little time for such research.

Most "slick paper" magazines are able to reproduce work in a fairly complete range of values, with high fidelity. Therefore the great mass of illustration is done in black and white watercolor, or black and white oil paint. A few of the older artists prefer to stick to the limitations of pen and ink line style, once the only sort of illustration which could be reproduced cheaply and successfully along with type.

It is often argued that line work is more like printing from type in its very nature, and that on aesthetic grounds a line illustration produces a better effect in combination with type than does a painting in full value scale. In some magazines and book illustrations this idea still prevails, and pen line or wood-engraved pictures and decorations are used; but these are much in the minority.

Usually such ideas come up for consideration only in the production of an especially fine piece of printing, which will employ the services of a specialist book-designer to work in harmony with the type used, and perhaps to design special initial letters, title page, tail-pieces, and so forth.

The cheaper sort of book illustration follows popular romantic magazine style, and both are now taking advantage of the increased efficiency of color-reproduction methods.

Illustrators also place their talents at the service of merchandisers who wish to educate the general public, or a selected section of the public, in the use of new products. Others attempt to impress upon the public the reliability of their organizations as institutions, or to suggest, subtly or not so subtly, that their products are better than those of their competitors. These promotional activities are called educational, institutional, and competitive advertising.

In such work the illustrator usually takes direction from an art director employed by an advertising office or agency. He may be supplied with a lay-out by the art director, showing him just what his composition should be, where it must be fitted around a type-set or lettered caption or slogan. He must be able to work accurately within the technical limitations described by the art director. His function is to give the drawing the pleasant technical treatment inherent in his personal use of pen, brush, or pencil. He is really hired as a sort of stylist or virtuoso of the brush, whose brilliant performance will entice the attention of that section of the public to which the advertiser wishes to appeal.

As in the case of the would-be cartoonist, the would-be illustrator must study not only drawing and painting, he must be familiar with the more popular sorts of contemporary painting

and with those which are becoming popular at the time, and he must know how to draw and paint so that his work will be well reproduced by the engraver and printer. Both the story illustrator and the advertising illustrator must work in harmony with and often subordinate themselves and their ideas to the ideas of the writer of the story or the advertising "copy," or the editors, art directors, or salesmen who are superintending the work. Disagreements due to "artistic temperament" will soon bring to the illustrator the realization that his work is only one part of the whole scheme; that if he is to succeed in work of this kind he must co-operate with others.

Fashion illustration is a specialty which appeals to many women as well as to men. Here the artist must combine a knowledge of clothing merchandise with a knowledge of drawing for reproduction. As a step into this field, work in advertising illustration for a department store serves as a good apprenticeship.

Of course any kind of work which calls for the expression of an idea in a picture may be done by the artist who serves commerce. He may express his own design of an object in drawings, or he may draw the ideas furnished him by others. All-round commercial illustrators may "free lance," or they may be on salary in an advertising agency office. To such an artist a knowledge of the business of advertising is as important as is the technical ability in his art.

The term "commercial art" covers such a wide variety of art work, good and bad, hastily produced, flashy and meretricious or careful and fine, that it is rapidly going into the discard. Any art work which is offered for sale is "commercial." The fineness of a work of art has nothing to do with the fact that it has been sold or not sold. The business of selling a painting is distinct from the process of producing it. It should be remembered that all the old masters were "commercial" artists, often acting as illustrators who took direction from priests or princes as to what they should paint.

If a work appears on a wall as a mural decoration, the chances are that the artist who produced it was commissioned by someone to do it. In this sense the work is as much a piece of commercial art as is the show-card, turned out quickly by a show-card writer for a small fee, in a show-card or sign shop.

The business of store window display is dependent upon the ability of the sign writer to dash off attractively legible letters, ornaments and bold illustrations in opaque watercolor or poster paint, so quickly that they may be sold cheaply. Work in a sign shop develops great manual skill, but gives the artist very little time for producing a high quality of work. Under pressure of the speed required, he originates little and copies much, developing dexterity and adaptability as business necessities.

Some shops, however, get occasional jobs for reproduction which pay enough so that more time may be given to them, and sometimes do scenic work which partakes of the character of mural decoration. A display shop may specialize in higher grade work for reproduction. Methods of reproduction range from silk-screen printing to four-color lithography, depending upon how widely the design is to be distributed. Packages, window cards, carcards and billboards are designed in such shops. (The term "poster" is now seldom used except to designate any bold and simplified style of rendering in color.)

Work in an all-round sign shop is a valuable apprenticeship for a career in advertising illustration. In contrast to engraving house work, where the emphasis is on careful use of black and white, color is used freely if sometimes crudely. Many successful illustrators and designers have gained their first rough-and-tumble experience with the business and craft sides of their work in such shops. Most of them will agree that the young "show-card artist" with intelligence and the will to improve his drawing, painting, and composition by study in his spare time, has a very good chance of progressing to types of work making greater aesthetic demands and rewarded by higher pay. Usually the prime requisite for the beginner is the ability to use a lettering brush and pen quickly and neatly.

Printing houses, engraving houses, lithographing firms, outdoor advertising firms, interior decorators and theatrical scene-painting firms all employ designers and illustrators. The ability to draw fluently is the chief prerequisite for eventual success in any of these

types of work. If the student masters only one trick of rendering, copying a popular style with the idea of gaining quick success, he will soon find himself the victim of over-specialization. Novelty and change are part of the business. No one type of work will be in demand for long. A broad knowledge of basic principles of drawing and design enables a young artist to adapt himself to the new circumstances continually arising in a highly competitive and changing field.

Let us return to the idea that an illustration must illustrate something. It must use the devices of draftsmanship to amplify the significance of something which has already been said in the medium of words.

Some ideas are better conveyed in drawing and painting than in words. It has been found that about two-thirds of the simple ideas usually expressed by the use of combinations of words may be conveyed to the mind more quickly and impressively through the use of pictures. The expansion in circulation of the new illustrated magazines, the great influence of the motion picture, show that people are growing more and more picture-minded.

Slowly but surely we are becoming impatient of lengthy descriptions in words when a picture will shorten the process of understanding. Modern textbooks depend more and more upon illustrative material to convey their information. Photographs are useful for this purpose, but more often a semi-diagrammatic illustration, drawn according to accepted conventions, is used to explain the text.

Textbook and scientific illustration is a special field which should attract the artist who has had some education in the field of science. An excellent reference work on this specialty is Scientific Illustration, by Ridgway (Stanford University Press).

Exercise (a)

Choose a narrative from a current newspaper describing an event which has taken place in your vicinity, or in an environment familiar to you. A wedding, a funeral, an accident, or any such happening will provide you with desirable material.

Pick out the most significant moment of the event, the climax of the action, or the period of greatest excitement or stress. Think about it, trying to see it in the form of a line pencil drawing as it might be reproduced in a newspaper. In your imagination, stage that moment of the event. Try views of the people and things in it from various angles until you get one which seems to emphasize the most significant action and the most significant persons in the action.

What are the gestures, facial expressions and details of costume and scenery which are necessary to the action and to the atmosphere of the place where the action takes place? Which details may be omitted so that more emphasis is placed on the necessary ones? Remember that fewer details better rendered will be more effective than disorderly complexity.

This assignment will be easier for you and more interesting to anyone else if you deal with something with which you are very familiar, something which you know intimately by sight.

Make your drawing in pencil, in a square of such proportions that if reduced to one-third size it would fit into the width of two columns of the newspaper from which you took the clipping. Include the clipping with the drawing when you send it in.

In rendering a drawing for reproduction as a line cut in a newspaper, the artist must render his subjects in black (of the pencil), white (of the paper), and line grays. Review Part I, Assignment 1, Exercise (g).

Exercise (b)

Read Shakespeare's Macbeth, Act I, Scene 3. Illustrate the line in which Macbeth addresses the witches: "Speak, if you can: what are you?"

You will be brought by this exercise into direct contact with many of the problems which beset the illustrator. What is this place? A heath. What is a heath, and in what country is such an environment found? What are the plants which appear on the ground, what geological formations should be suggested?

The weather is described in the line, "So foul and fair a day I have not seen." Apparently it is a day of alternate storm and calm; earlier in the act thunder and lightning are indicated.

What kind of people are the characters, and how many of them appear as necessary to the action? You must read enough of the story to find out what kind of people they are, and what characteristics of physique, gesture, and expression must be given to them.

What sort of costume is worn by people of this time and place? "So wild in their attire" describes the witches somewhat. What are their weapons and other accessories?

What gesture will best illustrate the command "Speak!"? What poses might the witches be taking at this time?

After one has found the answers to all these questions, it is necessary to consider how much of the information is actually essential to the mood and feeling of the place and the event, and how much detail would simply detract from the effect of the whole.

A drawing of a geological formation in great detail, clothed in a thicket of carefully drawn Scottish heather, upon which stand some lay figures displaying every detail of correct antique costume will not convey the idea of the story. "The play's the thing," as Shakespeare himself said, and archeological and other scientific interests must be subordinated to the symbolization of the mood and atmosphere of the event.

By some artists, details might be entirely eliminated, and the scene depicted in shapes intended to convey to the mind the emotional quality of the action and scene. Other artists might find a few especially significant details sufficient to suggest others.

This exercise will show you why the illustrator's studio or workshop is apt to resemble a museum, filled with the odds and ends of costume and properties which he uses in his trade. He often needs to rent, borrow, or improvise objects to draw, and to do research in books of costumery, in geographies and descriptions of plant and animal life, and in the customs of strange people of many different times.

Usually he develops a specialty within his field. He may become known for his knowledge of the sea, for his Wild West pictures or animal illustrations. In such a case he often owns the costumes and "props" necessary for posing models in characteristic ways.

For your short research into Macbeth, a look into a book on the history of costume will aid you. A Scottish heath may be found depicted in some other work. The play itself should give you an idea of the faces and figures of the people in the action. Or you may prefer to rely entirely upon your imagination and upon abstract symbols to gain your illustrative effect.

Execute this drawing the same size as the previous one, but in monochrome watercolor reinforced by pencil line. You may have to work through several "roughs" before you are ready to do a "finish."

Part II · Assignment 14

Drawing for Self-Expression

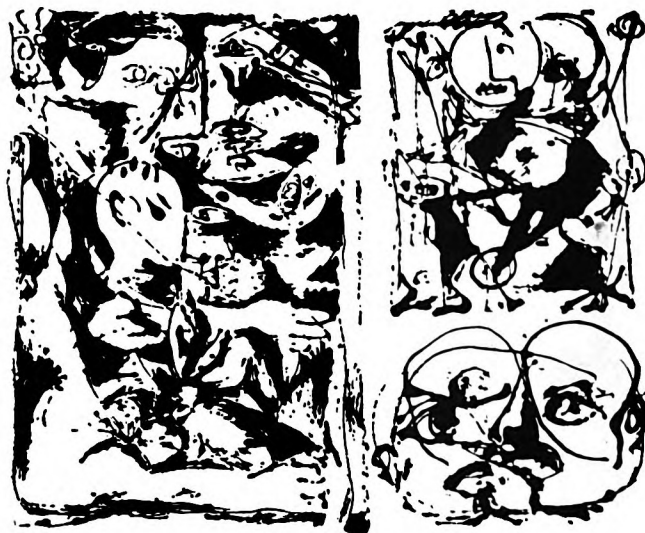
Introduction

In recent years there has been a great development in the field of abstract and non-objective or symbolic art. Such drawing and painting has always been practiced. In some cultures it has been the chief form of expression. In our own, at least in the recent past, it has been more or less confined to the artist's studio as preparation for other work or indulged in by the artist as a kind of professional play and appreciated only by connoisseurs. Though abstract and symbolic art may at times be easily confused, a clear difference exists between them. A geometric-abstract construction has always existed as the bone structure of any masterpiece of painting, no matter how realistic it appeared in the finished state. (See Part II, Assignment 3.) But now many drawings and paintings are exhibited which are without any apparent subject matter, though they display the same structure and harmony as does representational work.

In non-objective or symbolic art the expression does not lie partly in any depicted subject matter, but rather in the artist's own handwriting, in his technic alone, which is the way he relates and separates spots of paint. Just as your own handwriting may display excitement or depression, the technic of brush or palette knife, the way the color shapes are made, is expressive. To many this development in art is the only remaining field of exploration in times when improved camera techniques have taken over most of the task of representing and illustrating.

This art may be compared to music: it may be said to be visual music without words. If songs with words may be compared to illustration, then songs without words, such as chamber music and symphony, may be compared to contemporary abstract and non-objective painting. Such painting, though it has its decorative aspects, differs from mere ornament because of an intensified quality of emotional expression, which gives it an emphasis different from that of passive, decorative design. It is not practiced for the purpose of embellishment, or as background for something else, as is decoration, but for the purpose of self-expression and the communication of non-specific ideas, as is instrumental music. It is different from decoration in that it holds the center of the stage instead of constituting a supporting cast. As in the case of music without words, the appreciator of such work engages in a kind of emotional reverie, but with no member of the audience filling out the presented pattern is quite the same way.

For it is a matter of indifference to the abstract or non-objective painter whether or not you have solved the meaning of his creation in exactly the same way that he has done. Different people may come up with different



interpretations, solutions personal to them, and many different readings may be right. This is one of the important differences between such art and that of representation. It relates to larger things than specific places and events. It may be suitable to guide the emotions of many different people, precisely because it is not specific and does not furnish detailed and limiting description. It can be at once as vague and as definite in meaning as is the word "mother". Each one of us fills that word-symbol with a specific image of his own. An abstract or symbolic structure provides a path for our feelings and thoughts: it invites its observer to paint a picture in his mind, just as music sometimes invites a dancer to dance to it and to invent his own dance. But to do so, one must have a developed imagination.

The person who, through ignorance, looks only for a recognizable picture of something he has seen somewhere else in such a creation of rhythmically related lines and planes in pictorial space would do well to put himself into the frame of mind that is needed to enjoy instrumental music and to realize that the enjoyment of such a picture makes similar demands upon his preparation for such enjoyment. One must know how to relate one's self to a game in order to enjoy it.

It is of this kind of art that the composer J. S. Bach spoke, when he was asked why he put so much of his energy into the weaving of intricate compositions of musical notes which were understood only by comparatively few: "It is a glory to God and a pleasant amusement." Modern psychology says that it is also an activity which leads to mental health, both for the artist and the on-looker.

Drawing of this kind is here considered as subject to the same principles of composition as is all pictorial art, so read again the sections on this subject given earlier. What follows is only a co-ordination and amplification of these principles.

To hold the attention and to appeal to the mind, any arrangement of lines and planes or spots must have some degree of organic unity. In some way most of the units must work together, either through similarity in most of their qualities or by offsetting each other in balanced opposition. Harmony means having something in common.

Recognizable objects we see as units because we have learned through use that they are units. Actually objects in natural light appear to us only as aggregations of spots of light. For if the light does not clearly display enough of the important parts of the form we lose the objective meaning. It is only through our ability to read meaning into these spots of light that we recognize certain groups of them as forming a unity. We think of this as a figure or an object and all other spots of light which have less positive form as constituting its ground.

If the shape is not recognizable as a familiar object we are forced to fall back upon the relationships and separations between the various colored spots of light. Those having most in common will seem to hold together into a non-objective unity or shape. If two such non-objective shapes are seen together, or if such shapes are seen against a ground, we are entirely dependent upon likeness or unlikeness of the smaller areas of light and color which make them up for our idea of where the edge of such a non-objective shape might be.

Painted spots of color may vary in position, size, shape, hue, light-dark or value, purity or saturation of hue. Also their surfaces may be rough or smooth, transparent, translucent or opaque. Different pigments and different binders manipulated in different ways, by washing, dripping, or by brush or by palette knife will show widely differing optical qualities, although the hues involved may otherwise be the same. Any or all of these qualities of spots of paint may be made similar in adjacent spots--which may cause them to coalesce optically--or may be made quite different. Adjacent differences will emphasize each other.

Intervals between color planes are as significant as are the planes themselves. They may be clearly defined, or the areas may slur or grade into each other. Intervals may be long or short. They may follow a simple, mathematically precise order of change. They may exhibit equal intervals of change, or some regular change of interval as well as change of position. Any degree of regularity of change will contribute to the general effect of rhythm. Uneven sequences and apparently disorderly ones will break rhythmic unity. All these effects may be used expressively.

The analogy between music and non-objective or abstract art breaks down before it becomes of very significant use. Although the two may be compared, it should not be thought that their compositional methods can become very closely related. For the painter works in a much more rarified medium than does the musician and one more difficult to deal with by simple mathematics. To begin with, the laws of color perception are only beginning to be understood. The process seems much more complex than does the perception of sound. A prime difference between music and painting is that the musician weaves his patterns of notes on a thread of time, whereas the painter's units are seen very nearly all at once upon the surface of the canvas: they do not appear as a single unit, or as groups of units, one at a time. A time element may be involved, but it concerns rather the time involved in getting from the more important parts of the composition down through the successive layers of detail of the smaller parts. It is as though one first saw the tree as a whole, then its limbs, then its branches, then its twigs, and finally got down to the veins in the leaves. There may be rhythm and order on every level. This structure is a series of super-positions, not a line in time, and is composed around the optical center of the flat canvas and within the borders of a frame of given dimensions.

The picture, whether non-objective or naturalistic, is a dynamic balance of many elements held together by tensions. It is a kind of universe in itself, which may be approached from many sides and described in many different ways.

One profitable approach to this complexity seems to be the idea of figure and ground.

In the picture, as has been seen in the analysis of Bellini's Ecstasy of St. Francis in Assignment 3, Part II, there are elements which tend to make the picture two dimensional, a decorative pattern, and others which tend to open up the picture plane and to present ideas of volume and space. Sincerity in the use of the pictorial medium dictates that the flat, decorative pattern be not destroyed by illusory space and volume representation. The purpose of drawing and painting is not to create the illusion of sculpture, for the aim of art is never illusion. It aims not to escape from reality by illusion, but has to do with the creation of new reality by the straightforward use of a medium. So surface and depth must balance each other in order that true pictorial form be maintained. In this balance the figure-ground concept is useful.

Of course, in a more complex work, one figure may serve as the ground for another. It is usually only in simple exercises that we will find a single figure with a single ground.

The word figure is used here not in reference to some object, but to any shape, objective or non-objective, which demonstrates enough unity and integrity so that it is difficult to destroy. Recognizable shapes, even though parts of them are incomplete and their whole is only suggested, tend to complete their configuration in the mind of the observer. There is a persistence, like a will to live, in such forms, even when only vaguely seen. Once recognized, they will be recognized again by means of only a few of their essential features, and the mind will immediately fill in the missing parts. How many times have you read images into accidental water-spots or cloud forms? Any definite figure tends to hold to itself the parts that it needs to complete its configuration.

Figures may be such because of objective meaning or because of geometric regularity, or both. Perhaps the strongest figures have both.

For example, look at this cross:



In spite of the fact that the grey of the small triangles is the same the upper one seems to belong to the cross and the lower one seems to belong to the background. The lower one may even be judged as darker, more like the background, though it is not. This is because the cross is a strong, persistent shape.

Relying on the principle of the integrity of recognizable shapes, the artist often sets down lines and spots which only vaguely suggest the forms he wishes you to see, wishing you to participate in the completion of his forms by using your own imagination. The appeal of quick, spontaneous sketches, which leave out much but which suggest a great deal, is probably of this nature.

These new shapes may be called subjective, or felt shapes. The works of such a variety of artists as Rembrandt, Van Gogh, Feininger, Braque and Picasso may be used to illustrate this point, though such forms appear, frankly or subtly used, in most works of art of any stature and of any period.

Figures may be classified as opaque, translucent, transparent. They may have uniform surfaces, varied surfaces, may be perforated. Several disparate parts may be so held together by felt lines as to act as a unified figure. A figure may be reduced to little more than a grid through which other figures may be seen. As noted above, it may be completely delineated or only suggested, demanding more or less participation from its observer. If its shape is clearly enough seen, its major and minor axes may be felt and its position in space determined--whether it tips or turns or is parallel to the observer. If it has any clarity and strength of configuration, it will tend to stand away from any passive ground. This standing away may be increased or diminished by manipulating its edge and surface qualities.

We have hitherto approached a drawing by analyzing some object which we could see. Now let us go about creating an abstract object.

This scrawled line may seem a very simple, even foolish exercise, but continued practice in just such drawing is more apt to give you the satisfaction of self-expression than is drawing in which you are worrying about a multitude of problems. Some psychologists believe that the practice of this kind of activity releases unknown inhibitions, restraints, and frustrations, and has a definite therapeutic effect upon the nervous system.

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Perhaps you are wondering what this kind of drawing has to do with drawing from nature. Actually it still is drawing from nature, for from what other source could visual ideas come into our minds? Indeed, after one has practiced free drawing for a while, it becomes evident that a certain sameness is creeping into the work.

New effects are to be discovered only by returning to the infinite storehouse of nature. The way in which the limbs of a tree meet the trunk, or waves meet the shoreline, the outline of a mountain against the sky, the jagged silhouette of a scrap metal pile or a crumpled newspaper--all these things present different relations of straight lines and curves. They need only be translated into our medium: a rectangular area in which pencil lines are related to the four borders and to a middle point.

In arranging the lines from nature to suit this new series of relationships, changes must necessarily be made. We cannot expect by merely copying them to retain the effect they have given us in nature. Things which are set in a new environment produce different effects. We must change them in order to keep the qualities which caused us to notice them.

It is this process of translating natural forms so that they will retain their effects in new circumstances and a new medium which is so confusing to the beginning artist. By experimenting with freely drawn shapes and lines we learn more about the possibilities of our artistic media, and become more able to make effective translations from the things we see in nature.

Learning to work in an artistic medium is very much like learning a new language, into which we must translate, not literally, but idiomatically, ideas familiar to us in terms of another language.

To learn pictorial idioms, we must put aside temporarily the practice of drawing directly from nature, and experiment with direct self-expression in the medium itself.

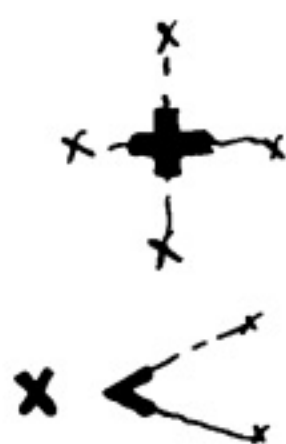
Now that we have a line and know where to get others, let us see how it may be improved. This will involve bringing the principles of pictorial space-order to bear upon it. The line is no longer merely a line drawn upon a flat surface, but one which implies forward and backward motion as well as up and down and right and left.



Attention Points

Wherever the line changes direction suddenly we find our attention arrested. These places we call attention points. The number of them in a composition and their relation have an important connection with the orderly effect of the final result. Attention points may be strong or weak, may hold our attention for a longer or shorter time, and accordingly may have a greater or less effect of weight in the balance between them which creates the balance of the whole picture.

Two figures which depend upon this direction-contrast for their attention-holding effect are the cross and the arrow. The cross holds attention at its center, producing a static effect, and the arrow directs attention beyond its point, a dynamic effect.



As humans we are subject to the psychological limitation that we cannot attend to too many things at one time. The attempt results in an unpleasant, disturbing feeling of chaos and uncertainty. If changes occur too fast for us we become bewildered.

Of course people vary greatly according to their aptitudes and training in their ability to grasp complexities, but a study of various arts shows that there is an average degree of complexity which is successful in composition. Expressed in terms of numbers, this extent of complexity may include approximately seven elements or units. We are able to perceive (that is, to grasp without stopping to count on our fingers) something like seven attention-points at any one time.



This immediately brings up the question: How can I draw a complex object if I am allowed only seven attention-points? The answer lies in the ability of the mind to integrate attention-points if it is given a fair start. Several attention-points arranged in a simple geometrical order need not be perceived as separate, but will be held in the mind as part of a form, connected by subjective lines.



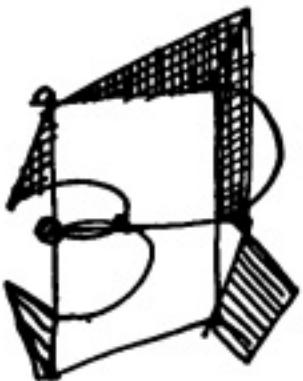
Thus four points arranged to make a square produce one attention-point in the middle of the square. The mind grasps the idea of the square as a whole, as it grasps a group of letters which make up a word. The word becomes the unit of thought, rather than the individual letters of which it is made up. So if we combine a square and a triangle in a drawing we have not four and three separate attention-points, but two dominant ones: the centers of the square and the triangle.

Now let us return to the line we have drawn. How many line-direction contrasts have we set down? Are there too many for comfortable perception; is the total effect disorderly and chaotic?



Let us apply an arbitrary order. Find some attention-points which happen to stand in such a relation that they make squares or rectangles when connected with dotted lines. Emphasize these by accenting the points themselves, making them bolder and blacker than the rest of the line. Make them into small black circles, for instance, which contrast with the whiteness of the paper. You have now added to their attention-holding power by giving them dark-light contrast where before they had only line-direction contrast. In drawing the dotted lines which produce the geometrical planes, consider overlapping and space-order.

(2) Now make another drawing from this one, emphasizing further the balance and order which were found by the integration of the main attention-points of your line. This time put in the new planes as areas of monochrome watercolor which contrast in value. Try to arrange your value scheme so that the average of all values is somewhere around a middle grey. Some will be blacker, some lighter.



Omit the small circular accents of the attention-points in this drawing, but let your original line run alongside of and through the planes you have emphasized. Sometimes it will go behind a plane, and the plane must then be considered transparent.

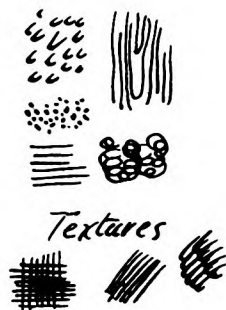
It will become apparent that a considerable amount of three-dimensional space is suggested by the planes which overlap. Where the edge of one plane overlaps another, use contrasts in value so that the overlapping is clear. You need not keep the value uniform over the area of any one plane, but may modulate so that one edge is darker than another, as space-order and pattern rhythm seem to dictate.

(3) In a third drawing develop each plane into a solid. For instance, a square will become a cube, with the original square as the face of the cube. In this drawing keep your original line only faintly dotted, as a construction line. The chief attention-points in this composition will be the volume centers.

You will probably find that there is some effect of unbalance, due to the increased weight effect of the new volumes. Hitherto we have done nothing with the whiteness of the paper background. Try to overcome any effects of disturbed balance by modulating the background with dark and light, thus creating a number of minor attention-points which may effect a balance. If the composition seems to be about to fall out to one side or the other of your paper, correct the effect by producing an opposite movement in the cloudy shapes which you create in the background.



(4) In a fourth drawing combine planes with solids, adding the effects of rough and smooth texture, and texture of different directional qualities, to differentiate the planes and volumes (in place of values in dark and lights).



Of course the textures will in themselves create some value effect. They should be contrasted effectively from the standpoint of rhythmic space balance and pattern, and to preserve overlappings necessary to the space drawing. In this drawing your original line will be present only as it dictates the general movement and relative position of volumes and planes.

Send in these four drawings after you have repeated each a sufficient number of times to do it neatly and fluently. Each may occupy a full sheet of your pad paper.

Exercises like these may be begun in various ways: One may set down a number of spots as a beginning, and then connect them with a line, developing the line into planes or volumes or both. One may create a blurred or cloudy effect with values of watercolor or with pencil scribbles on the paper, or both, picking out desired sharp edges with pencil or brush and developing these into forms.

The edges of the forms need not always be clearly defined, but their values or textures may flow across their boundaries into each other, creating closer relations between areas. A drawing with too many such passages becomes too fluid and uncertain in its effect. No modulations at all will perhaps create an effect of hardness and rigidity. The degree between these extremes will be determined by the artist's own reaction to his work.

Charcoal, and pastel or colored chalk are almost ideal media for such experimentation, because they allow very nearly complete freedom. A paint of which the base is a harmless starch and pigment mixture is on the market for "finger painting." This also allows great freedom.

However, one must execute the work in a permanent medium if it has permanent value as a design, or if for any reason it is desirable to preserve it. In this class of media one of the most flexible and free is that of oil paint.



Part II · Assignment 15

Drawing for Self-Expression (cont.)

Part II of this course has attempted to show you some of the many special fields which the ability to draw well may open to you. Each problem has been purposely contrasted with the others, so that you might sample widely different sorts of art activity.

The successful execution of so few problems will not make you a professional in any of these fields. Whether you study by yourself or in a regular school your study is bound to cover a period of at least four or five years of full time work before you may expect to become really proficient in a special line and to claim professional standing as an artist.

You may find sporadic application for your abilities sooner than usual, but many difficulties will appear due to your short training period. Do not expect early professional success. In spite of some irresponsible advertisements, professional standards are not attained in the field of art in a shorter time than they are in law or medicine. However, successes from the standpoint of amateur achievement may come after a year or so of study.

The last assignment requires you to coordinate the knowledge gained during work on the problems of Part I and Part II.

Exercise (a)

For these exercises plan two compositions which will use as subject matter combinations of figure with landscape, and figure with still-life. One should be based on outdoor study and sketching, the other on indoor work.

For the first composition (a) make sketches of people doing something together out-of-doors, in an open landscape or park environment. Gardening, strolling in the park, picnicking on the beach, boating or fishing on a lake or river are suggested as possible subject matter.

The figure group may be studied separately, studies being made first in rough sketch form, and developed further in the studio from your work in figure construction. You may wish to pose yourself in order to get the feel of the body positions, or you may wish to ask a friend to take some of the poses of the people you have sketched in order to perfect them in your drawing.

The landscape environment should be a definite one, not just "made up." Make separate study sketches for this, indicating at least roughly where your figures are to come, if they do not happen to appear where you want them in the landscape you have chosen.

After studying the landscape and figures in sketch form separately, combine them in a composition so that they look as if they belonged together. Execute this as a combination line and wash drawing, the full size of your pad sheet.

It is one of the significant parts of the execution of this problem that you should fit your figure group into the landscape composition. You have seen in the section on caricature how it is necessary to enlarge or subdue some part of a face for purposes of more emphatic expression in another part. Now use this same freedom for purposes of more effective space and pattern rhythm.

You may lengthen or shorten a figure, or a part of a figure in this interest. Michelangelo was considered a master of anatomical construction and yet, if one measures the actual dimensions of parts in some of his statues, they are changed to such an extent that human beings made in their dimensions would be anatomical impossibilities. In their places in his compositions, however, they express just what he wished them to express. Domenico Theotocopuli, better known as El Greco, is another artist similarly highly regarded and worthy of study, who used figures in this free way for compositional purposes. To a greater or less degree all composers of pictures have exercised these liberties.

This exercise will serve as final evidence of your ability to sketch out-of-doors and to use your sketches constructively.

Exercise (b)

The second composition should be approached from a somewhat different standpoint. Here you may actually pose a figure in a room and study the relation of this figure to the walls, floor, and furniture. The total effect of this subject should be translated into a composition like those which you practiced under the assignment on self-expression. The difference here is that your forms are actually before you in space, suggesting lines and planes.

Use the posed figure and the interior, furniture and still-life as a sort of springboard for your sense of design. Pick out planes of light or dark which have rhythmic spatial relationships and emphasize them. Subdue those which seem to have no such relationships.

Work out tensions between the front and back of the figure and from the figure to the wall back of it.

Work out pattern lines, subjective or objective, which keep the forms anchored in relation to the pattern of the picture plane.

Use everything you have learned to make this drawing into a balanced, rhythmic space drawing which has value as an abstract design. If certain characteristics of the face and figure of the sitter are skillfully expressed, the drawing will take on additional value as a portrait or caricature; but your effort should be first of all in the direction of rhythmic space construction.

Drawing towards Painting

Exercises in Assignment 14 have dictated the use of rather simple geometrical shapes with clearly defined edges. This is well enough for line drawing media, but when you begin painting you will find that the brush and pigment usually makes spots and planes more easily than lines. Even some line media are often used in a painter's way (see Rembrandt's etchings, for example, as opposed to the purer line technic of Durer's etchings and engravings). Artists speak of the draftsman's line and of the painter's plane or spot. In the first the concern is with the edge, in the second the concern is with the quality of the surface. The total shape of the spot of paint may approximate some simple geometric form, but it is the surface area and its texture which becomes of major importance when one begins using color, or even black and white values, rather than the line around its edge. The space movement of the spot or plane will be determined rather by the implied horizontal and vertical axes of the spot than by any regularity in the direction of its edges. Edges may be ragged, soft, vague in places, and yet the spot of paint may clearly hold its place in the structure of the composition by virtue of its total shape and the additional force given by its value or color.

Painting is decidedly something other than colored drawing. In painting it is the impact of the total color area itself that is of first importance. In moving from a drawing towards a painting the work must undergo a translation into the new medium; otherwise it will seem hard and mechanical. There are drawings which use color secondarily, but a true painting uses color in a primary way and line in a secondary way or only subjectively. Lines in paintings may occur only as imagined, or felt ones.

Artists use the word tight in a special sense to refer to drawing or painting in which the expression is cramped by false ideas of mechanical precision. Very often a line drawing which is colored rather than recreated with the brush will be tight. The words free and loose are used in describing the qualities in drawing and painting which are the opposite of tight.

Once you have thoroughly grasped the uses of planes in blocking in forms, the next step should be to practice working in a looser way. This does not mean that you will abandon the constructive principles you have learned, but that you will use them with more courage and casual authority, more suggestively. Your drawings will look easier and will be easier to look at.

The whole idea of freedom of expression is involved. A scared, timid drawing is the product of an uncertain draftsman. In order to get the feeling of freer expression it is better to pretend at times that one is full of confidence, that one knows it all, that one cannot possibly make a mistake. Just let the ideas pour out as they may, to be considered and edited later.

If you have done your disciplinary work well, a certain amount of this discipline has become habit. You may work intuitively, without thinking about it at all, and you will discover that many of the controls and methods you have worried about in the past now come quite naturally. They have become a part of you and your handwriting. As you gain strength on the disciplinary side, it is good to try your wings freely once in awhile so that you will get the feeling of flying. You may fall a few times at first. But you will never be free unless you make an ever growing effort. The aim in the end is not mechanical precision and copybook correctness, but a free, lyrical, poetic style in which one's personal, emotional handwriting has a chance to show. Even if the drawing is rather weak at first, the courage with which you put down the positive, dashing strokes will make it more convincing and appealing.

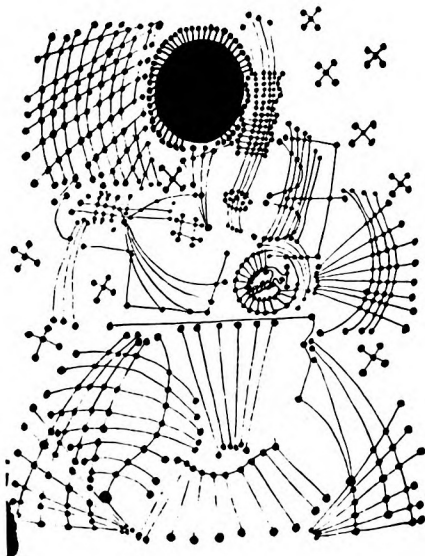
Such spontaneous expression has always been found in the works of the masters--more especially in their sketches and preliminary drawings. For example, see Rembrandt's pen drawings. But in recent years this aspect of art has come out of the studio to become a chief interest in contemporary painting.

The current group of artists practicing these intuitive methods has been loosely identified by the name Abstract Expressionism. The forces which have led to the ideas of this contemporary school have long been growing in art. They are perhaps first most easily identified in the works of such painters as Kandinsky, Klee, Picabia, and Picasso. Among later painters in America who are leaders in this kind of art are Hans Hofmann, William de Kooning, and Jackson Pollock. You are referred to art magazines for the current developments in this undoubtedly important new dimension in visual art. The history of its development in America is told by Rudi Blesh in the book, Modern Art USA.

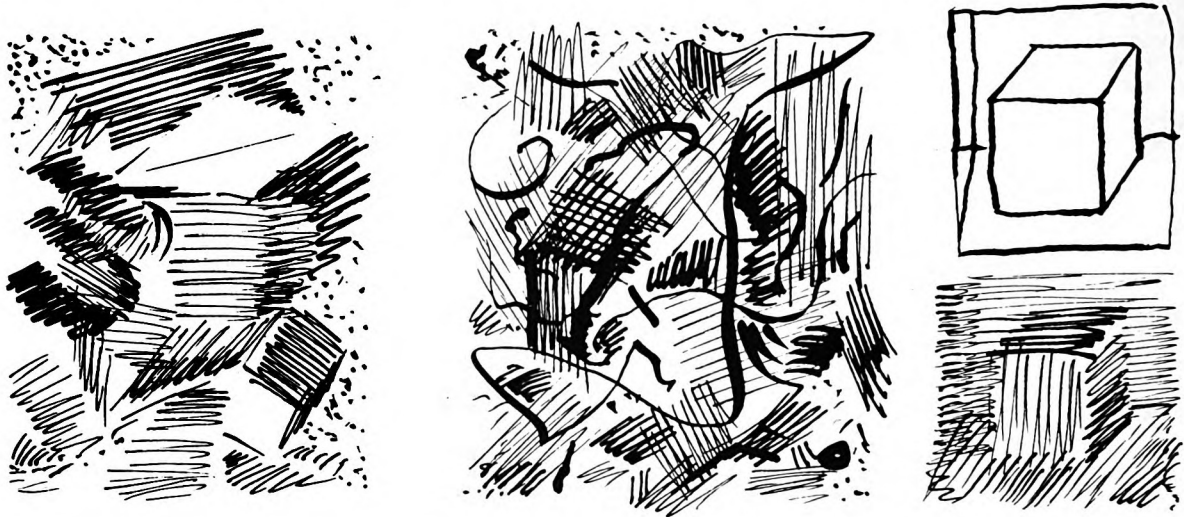
Whether or no you wish to become this kind of draftsman or painter is beside the point. The members of this movement would be the last to coerce anyone into a style of expression not honestly felt as his own. That would be the academism that they have discarded. But art has to do with other things than cold facts mechanically described. Such work never has the same moving power as do the same facts presented with poetic freedom and dramatic warmth. There must be a certain amount of joyous I believe! in a work of art. The direct, intuitive, emotionally dictated kind of expression has always been the more naturally rhythmic and hence the most forceful and efficient expression.

Exercise (c). Look again at the results of Assignment 14,
Ex. (a) (4).

Begin with this as a structural idea, but this time draw no lines or planes. At the most allow yourself to sketch in very lightly the major and minor axes of the main planes. Do not draw their edges. Then, choosing the axis which seems most important for each plane, express the surface of the plane by a scribble which follows the form as indicated by the axis. Scribble quickly and freely, finishing one plane at a time, stopping to consider between planes, not while finishing one plane. The results may follow the contours and outline of the plane you are interpreting only loosely. If dark-light values seem to run together, scribble over the area again till the values contrast properly at their edges. After you have carried the drawing as far as you can by the scribble method without any enclosing lines, consider using a minimum of such lines. Not



complete ones, only accents here and there where the results of the scribble seem to need clarification or sharpening. Above all remember that no hard, straight, drawn edge should appear and dominate this drawing. Edges must be felt and suggested rather than drawn. This



kind of drawing is a step toward the painter's approach to form building. You will find the directional brushing of Van Gogh, Cezanne, or Frans Hals interesting to compare in this connection. Do three such scribble drawings using soft pencil.

Rhythm

Since rhythm is a quality essential to all forms of art, it is fitting that the last theoretical matter given you should emphasize this aspect. It is perhaps the only quality common to all successful art work of any kind or place or time.

Pictorial rhythms are expressed in terms of point relations (attention-points), line relations, plane relations, and subjective volume and space relations. If elements are so related as to indicate the main space direction of the composition, the rhythm they express will be a part of the spatial rhythm. If the relation is a vertical or horizontal one, or lies on a diagonal which moves in opposition to the main space direction, it is part of a pattern or two-dimensional rhythm.

Of a given set of units in a drawing, the first thing to be considered is: Do they symbolize successfully the idea or feeling which was in your mind when you set them down? If not, it will be because you have not found the right lines and planes in the right relations for the expression of your idea, and further sketching and experiment are in order.

You may decide that the lines and planes you have set down convey a disorganized and imperfect idea of the imagined or observed subject matter. If such is the case you may have seen the subject in a non-rhythmic way.

It is possible to train one's self to see rhythmic relations as well as to become oblivious of non-rhythmic relations. Try again to see your subject in terms of order and rhythm. Put down those planes of light upon it and those lines of its silhouette which are clearly in rhythmic relation. Leave out the other parts. No form needs all its details in order to be recognized. An obviously orderly and rhythmic form is more easily understood; so is a rhythmic composition made up of many forms.

No matter how much you may be interested in representation, symbolism, or any of the other things which drawing can do for you, your work will be efficient in expressing them in proportion to its rhythmic construction.

When you have made every effort to see your subject matter in a rhythmic way, and have set down the first lines of your composition modified from their optical appearance

with rhythm in view, you must then work out subordinate details in harmony with the larger rhythm. If you have laid a sound foundation, your drawing will be capable of supporting more and more intricate detail, so long as you keep each stroke in proper rhythmic order with others of the same importance.

If you fall into disorderly and over-complex relationships anywhere in your construction, further drawing will simply add to the confusion. It is better to begin again at the beginning. The fault in the initial laying-out will sometimes not become evident until there is an attempt to finish the drawing.

This is why the student who would excel must make many beginnings. He must master the art of laying foundations before he attempts superficial cleverness.

When these technical matters have become second nature, you will be out of the student stage. After you have toiled long enough you will find your drawing becoming an expressive instrument, used fluently as a language, a way of communicating with the world, and a means of perfecting your own ideas. You may look confidently beyond the hard technical drill toward freedom and spontaneous expression in art.

